# TRENDS IN EDUCATION

2

The Evolving School
Teachers and Youth Work
Attitudes to Teaching
Programmed Learning
Student Accommodation
The Abitur Examination

APRIL 1966

Department of Education and Science

HMSO 3s 6d NET

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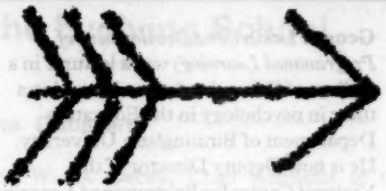

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TRENDS IN EDUCATION
is produced quarterly by the Department of Education and Science, Curzon Street, London, W.1.

Published by Her Majesty's Stationery Office

Printed in England by McCorquodale & Co. Ltd., London

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# Contributors

**L. J. Burrows** (*The Evolving School*) is a graduate (Modern Languages) of the University of Cambridge. He taught in a direct-grant boarding school, a grammar school and in a number of primary schools in Surrey before joining HM Inspectorate in 1946. He is now District Inspector for the Metropolitan Division. His special interests are primary education, religious education and education in urban areas.

**W. D. Lacey** (*The Evolving School*) was appointed Chief Architect and Joint Head of Architects and Building Branch, DES in June 1964. He had been involved in the design of schools since 1946 and for six years before joining the Department was County Architect for Nottinghamshire. In 1960 he was architect for the British school at the Milan Triennale Exhibition which won the Gran Premio.

**E. Pearson** (*The Evolving School*) was appointed to the Inspectorate in 1939, having served previously as head master of a senior boys' school. He moved to London in 1953 to work in Architects and Building Branch, and is now Staff Inspector for school buildings and equipment, working closely with the Department's architects in designing schools.

**George Leith** (*The Development of Programmed Learning*) was a lecturer in a College of Education before becoming a tutor in psychology in the Education Department of Birmingham University. He is now Deputy Director of the National Centre for Programmed Learning. He was principal author of a *Handbook of Programmed Learning* and took part in the BBC 2 series *What is Programmed Learning?*

**Basil E. Thomas** (*The Abitur Examination*) taught in grammar schools in England and Wales before joining HM Inspectorate for Wales before World War II. At present he is Staff Inspector for Secondary Education in Wales and specialist adviser in modern languages to the Welsh Department.

**E. Glyn Lewis** (*The Relevance of Comparative Education*) taught in grammar schools and at a university before joining HM Inspectorate for Wales as Staff Inspector with responsibility for educational research. His other interests are English language and bilingual education on which he has produced a number of published reports.

*The opinions expressed in* Trends in Education *are the writers' own. They may not necessarily be in accordance with the views of the Department of Education and Science*

TRENDS *listens in on a group of architects and school inspectors discussing some of the things that are influencing the design of schools and the direction future developments are likely to take.*

# The Evolving School

## The Debaters

**Mr. W. D. Lacey,** Chief Architect of the Department of Education and Science (in the chair).

**Mr. D. L. Medd,** Principal Architect, Department of Education and Science.

**Mr. L. J. Burrows,** HMI Divisional Inspector, Metropolitan Division.

**Mr. E. Pearson,** Staff Inspector attached to Architects and Building Branch, DES.

**Lacey:** We have been invited to participate in this exchange of views on the most significant ways in which the design of our new schools is developing. In the course of this discussion we are also going to try to identify what appear to us to be the most likely trends for the future. The first we probably feel we can do with some degree of confidence since we are all closely involved with the building of new schools: the second is likely to be more difficult.

**Burrows:** To open the discussion, would you all agree that perhaps the best school—by definition—is one in which the average teacher will provide the best education, not the school in which the best teacher will.

**Lacey:** Bearing in mind that the schools we are now building will be used for a substantial number of years, do you mean that architects should design to satisfy the present needs of the average teacher?

**Burrows:** I think it would be a disastrous confession of defeat if the performance of the average teacher does not rise steadily over the next 50 years. We must therefore consider the very good and the average teacher when thinking about design.

**Pearson:** I have always taken the view that we should design a new school according to the best educational practice that we know at a particular point in time, for the simple reason that there already exist thousands of schools designed to requirements that were promulgated years ago. Therefore the school that is being designed now, and is to be opened probably in three years' time, needs to be at the spearhead of educational development. The average teacher coming to work in a forward looking project may feel lost at first—but new opportunities are there to challenge him. That is why some new ideas expressed in a building are not used to the full when the school is first occupied, but the opportunities are exploited in the course of time.

**Medd:** Isn't it true to say that before 1939 there was only a relatively small number of *avante-garde* people in education? Since 1939 many

have caught up and applied the doctrines of earlier pioneers. There is now increasing opportunity for buildings to catch up with education.

**Lacey:** Collaboration between educationists and architects is the most important aspect of this subject. The rapidity with which new educational practices are progressing is proving a challenge to the architects' creative ability by meeting the needs of these practices. This is well illustrated by the remarkable way in which primary school design has changed during the course of the last few years. Before 1939 classrooms were considered as a series of boxes into which you sat children and poured information into them.

**Burrows:** A much more secure knowledge of the processes by which children learn has added to our progress. The kinds of school that primary teachers like include a good many substantially-built Victorian schools which—under present conditions—provide extra space because they are now used for fewer children than they were intended for. This point about extra space has been applied to new design.

**Medd:** When we talk of space I believe it is important to think of its quality rather than quantity. Broadly speaking, conditions in this country determine that all primary schools for a given number of pupils are of the same size and, therefore, our skills must be exercised on how we deploy the space in terms of educational opportunity and character.

**Pearson:** Our present position is surely the outcome of two strong forces which have been at work in post-war years. The first is in the changed nature of personal relationships between teachers and children, teachers and parents and between teachers and officials; relations are now quite different—we have been attempting to know and understand each other rather better. The school environment created by good teachers has helped this process. Secondly, there is an active rather than a passive approach to learning and this, of course, requires more space to provide fruitful experiences for the children.

**Medd:** Activity, furniture and space is the logical order of thinking in school design. Educators should be suspicious of any school plan presented to them without all the furniture indicated on it.

**Pearson:** I agree. We are talking about space for living as well as learning and this is particularly true of the primary school. The struggle to determine the balance between the two aspects 'living' and 'learning' is a difficult one in secondary school design; accommodation for both aspects of education is equally important. The first is essential to the second and is especially important in creating the right attitude of the pupil towards the school society.

**Burrows:** A secondary school is a much more difficult proposition from this point of view, both to design and to foresee what its future requirements are. There must be opportunities for personal relationships, for instance in tutorial groups and careers guidance work, and there has to be a far more disciplined and cut-and-dried provision of accommodation and teaching space. In the past there has been some overweight on the side of provision for subject teaching and not enough for personal relationships—for example, tutorial groups, careers guidance and an informal environment for sixth formers. But it is still difficult to forecast what the right balance should be.

**Medd:** Few people consider the secondary school as a whole; that is to

say in terms of the different needs of the wide age range and widely different abilities and interests of the pupils, not to mention the subtle differences between the needs of boys and girls, nor the relationship between the school and community. The architects' points of contact are almost exclusively with the H.M.I. panels, advisers and teachers' organisations which exist to defend the special subject interests. It is like a struggle for the survival of the fittest for a share of the timetable. The social structure of the school can only be satisfied with what space is left over after the provision for subjects. Architects need help in the form of arbitration from wise educators who see the wood as clearly as the trees.

**Burrows:** We can see the architect's difficulty but I don't think there is any easy answer. The middle and upper years of the secondary school make problems of organisation very difficult because the curriculum is overloaded. The answer to the question 'what are the elements of a liberal education?' is not clear-cut. You will always need, at the secondary level, buildings designed and equipped for the advanced teaching of individual subjects such as the sciences. Library provision certainly cannot be less in the future than at present and in terms of building neither can the provision for subject needs.

**Medd:** There you are! We are looking at the school as a pack of special subjects. I am sure we have got to think differently, if school life is going to capture the imagination of the majority of young people in the coming decades.

**Pearson:** There may be other design solutions to this; the problem is to make available to a particular school or group of pupils specialised skills of a varied kind; for example there is the need for all pupils to have experience at the laboratory bench and so on. Hitherto we have provided for this in special rooms designed for special subjects. In 20 years' time don't you think it will be a question of individual learning situations, not necessarily in separate subject environments? Tapes and teaching machines will play an increasing part in this change and should remove some of the drudgery from routine teaching.

**Medd:** So you foresee the future as education by an ever-increasing number of secondhand processes?

**Pearson:** On the contrary, there will always be a place for the inspiration of the best teachers balanced by the knowledge gained from other sources.

**Medd:** We must welcome the service of anyone who wishes to serve, and plan to use them well. At present, school design is excessively influenced by the economic disposition of equipment and not sufficiently by educational considerations. In fact, education is excessively influenced by the physical needs of specialist equipment. We hear much about the need to cross-fertilise the disciplines in the interest of a balanced education, but we don't design for this.

**Pearson:** You are really advocating a particular range of practical work for every pupil. There must be some limitations to what can be made available to an individual pupil, especially where expensive equipment is concerned.

**Medd:** The logical conclusion of this is that small groups of pupils would have at their elbows everything from a ripple tank to a sewing machine—obviously this will never be the case; but we can move a long way from hermetical boxes to mixed facility centres.

**Pearson:** That is so. But don't forget the further we go in this direction the more we shall come up against the difficulty of deploying the special skills of teachers. It will be more difficult to design for them to operate satisfactorily in these circumstances.

**Medd:** But aren't teachers in the future going to need to work in different ways? They have already come off their platforms, haven't they?

**Burrows:** What is being suggested here would make for a much more coherent experience of education in particular for the less able children. By and large, secondary schools in the past have not been designed to meet the needs of the less able pupils.

**Lacey:** If schools become involved with a wider range of activities and are provided with a greater diversity of equipment, won't this create a need for more staff?

**Burrows:** I would suggest better trained and better organised teachers are required rather than *more* of them. Certainly I think the more able children educated in a school environment of the kind we are envisaging here would be capable of working for a great deal of the time on their own. You might be shifting the balance of staff without needing to employ more.

**Medd:** The multi-facility idea does seem to make for a more efficient deployment of teachers, and the more convenient catering for various sizes and types of groups of pupils.

**Lacey:** I visualise that this conception will make the design of secondary schools more difficult. It is almost certain that the problems of resolving the competing elements from specialist activities will be more complex.

**Burrows:** There is an opportunity here for the large school, which seems to be becoming the norm for the future, to offer this facility, rather than the types of school we have been used to.

**Medd:** We must face up to the fact that teachers may change their methods of working—the 'specialist pack' approach to education is being challenged. If you throw this overboard and take the teachers out of their separate little boxes and encourage them to deploy their skills differently, the present basis of school design will have to change. I think that this does not necessarily make for more expensive schools, but they will be unrecognisable by comparison with present ones. In fact, it's a projection from the primary field, isn't it? In the primary field they have already found ways of using specialised equipment in small groups.

**Pearson:** The new art and craft centre in a girls' school I visited the other day is an example of what we have been discussing. Here accommodation has been very fluidly planned. After much discussion with the teachers this form of design was generally accepted, though some members of staff voiced their fears at the beginning. But now all objections have crumbled, and the advantages gained by teachers combining their skills and working with each other and by the easy movement of girls from one craft space to another are tremendous. It is this sort of experiment that triggers off in the minds of teachers the idea that there are other ways of organising work than in fixed class groups which provide wider opportunities and greater variety of programmes.

**Lacey:** At present the process of handing over a new school when it is completed is not too difficult and follows a fairly familiar pattern. But, with this new conception, it will be most important to convince the users of the thinking that has gone into the preparation of the design; otherwise the results could be disastrous.

**Medd:** The more unconventional one's design, the more important it is for teachers to understand thoroughly the educational motives behind it. In other words, a school project must be tackled jointly from the educational and architectural standpoints.

**Pearson:** This is very true. Unusual choices of accommodation or experiments in the use of space might be made and it is important for teachers to understand the decisions reached. To return to the girls' school I just mentioned, there was a run-down of provision for domestic science, and some of the space usually given to this has been redeployed in a general workshop area where modelling, wood-carving and metal working are all done. These facilities are not commonly provided in a girls' school.

**Lacey:** Would you say the sixth-form college is a broader concept of this idea?

**Pearson:** Yes indeed. The sixth form centre we have been designing developed around a changing set of requirements in which we decided to deploy a large element of space in what is termed social accommodation; and also to use a generous amount of space for private study purposes, which makes less space available for what we usually term 'subject spaces'. For teaching purposes we are providing a couple of large lecture rooms for 50 to 120 students, and seminar spaces for the various subjects studied. In addition there are eight to ten tutorial spaces to accommodate up to four people. This represents an entirely different use of space for promoting the life and work of a community of older girls. There is not as much actual teaching space as there used to be, but much more 'learning' and 'living' space. It represents a great change in school design.

**Medd:** From what you say it sounds as if the planning of this project has been successful because all the spaces are used for broadly the same kind of things: light practical work with fairly simple equipment. One would get into difficulties if one needed to use heavier or noisier equipment, or wanted to indulge in much formal teaching.

**Pearson:** That is true. A space for painting or hobbies was considered, but this had to go.

**Lacey:** We have talked a lot about people when we were supposed to be talking about buildings, but I think we all understand the reason for this. Good design can only start from consideration of people and their activities—the best of our post-war schools have all been the result of this concept.

**Medd:** Good buildings challenge by opportunity—bad buildings by inhibition. We can never design the ideal school, but we can always design a better school.

**Burrows:** Certainly. Good design encourages evolution the whole time.

**Lacey:** Yes, but we must not forget the third role—good administration.

**Pearson:** I always think it is a good thing that the disciplines imposed by administrators have made us selective in our thinking. Thus we are compelled to place values on what we do, and this should ensure that

we get the best educational return for money. It has enabled us to sponsor certain ideas and to reject others.

**Lacey:** At times it has appeared to make our work as architects more difficult; but frequently the challenge has stimulated a more inspired solution.

**Medd:** Administration has made a difficult situation into a tolerable one. In this country the curricula in our schools are not established from headquarters. Perhaps if they were, an ideal school design would be more likely to have appeared by now. But in those circumstances there would be no evolution. Perhaps it is fortunate that the ground is being cut from under our feet all the time.

**Lacey:** The sheer problem of providing the number of schools at the present time puts pressure on both architects and the building industry, and here the use of prefabricated buildings and other new techniques have helped considerably. From your experience of schools built in this way, how do you assess the influence of prefabricated building, Burrows? Do you think they have had a good or bad effect?

**Burrows:** I have nothing against them at all, and very fine minds have obviously been engaged on their design in the first place. The architect still has plenty of scope in using these units. They should surely help the average designer in getting away from the all too common box-like effect of modern buildings.

**Medd:** Don't forget it is just as easy to create a box effect by prefabricated methods as by conventional methods—but well used, prefabricated methods do seem to have caught the spirit of modern education. By their very nature they have a sense of space, light and informality which can remove a feeling of bulk and restriction that you often get from the load-bearing methods.

**Pearson:** I don't know if this is true architecturally, but so many of the traditional school building methods resulted in linear patterns of teaching spaces. Prefabricated systems make possible cluster arrangements of space which are more desirable educationally.

**Medd:** I agree. The best systems have been designed to do just this. Although there are things that you can't do with even the most highly developed prefabricated systems, the net gain from their use is overwhelming. A common criticism of these methods that the architect should listen to is that of acoustics and sound insulation. Technical problems of this kind are not yet entirely solved.

**Lacey:** How important is environment—can good teaching and good education be provided in poor schools?

**Burrows:** Of course, it *can* be carried on in any type of building with good enough educators, but it will be far more restrictive in kind and less effective in quality. The first requirement should be that a school is an attractive and pleasant place to work in—but not necessarily the most expensive.

**Medd:** When one talks about good school environment one doesn't mean any tendency to be lavish or posh, or to impose beauty self-consciously. A good building *is* good—not made good. If the character of the interiors reflects the various activities for which they are designed, there will be a fundamental sympathy between the occupants and their surroundings.

*The Debate Continues*

*In 1960 an option was introduced experimentally in the course at eleven colleges of education for intending teachers also interested in youth work. *Experience has suggested that this option is of value educationally and the number of colleges offering it is to be increased.*

# Youth-Work in Teacher Training

MARTYN CLÉMANS

The formal position is that all qualified teachers are *ipso facto* qualified youth leaders. The Albemarle Committee which investigated the youth service gave full support to the idea that teachers make good youth leaders, but overestimated the contribution the colleges of education could make to the full-time staff of the youth service; they underestimated the attraction and potential value of the joint teacher-youth leader post. Basic thinking at the time (1960) was that, 'full-time leadership is a life-long career for only a few'. It would not be fair to attract intelligent men and women into the work unless it was made easy for them to move across to other professional work in education or the social services.

Many tutors in colleges of education are doubtful about the word leadership in 'youth leadership'. To many this implies a flag-waving, follow-me-up-the-hill approach. Many feel the title 'youth work' is more appropriate, putting the emphasis firmly on guidance.

The details of the syllabus for the course differ from one college to another, and there are differences of approach between individual tutors—but there is a considerable area of common ground. Courses generally include some work on the social background to, and the psychology of, adolescence; the study of groups and group relationships; the structure of the youth service and the history of its development; the principles and practice of youth work. In some colleges students do additional work on the social and economic system of the country and the functioning of local and national government.

The amount of time students devote to the course varies enormously, even in individual colleges. It may be more than 1,000 hours a session where time is spent on youth work during vacations: it may be only a few hundred. Theoretical work for the course averages two to three hours a week. In some colleges the course extends over two years and in others over three. In most colleges where theoretical work is confined to the second and third years, students who are thinking of

*Chelsea College of Physical Education (Eastbourne); Culham College (Abingdon, Berks); Dartford College of P.E. (Kent); Edge Hill College of Education (Ormskirk, Lancs.); Kenton Lodge College of Education (Newcastle); Kesteven Training College (Lincs.); Notre Dame College of Education (Liverpool); Newland Park Training College (Bucks.); City of Portsmouth College of Education; Swansea College of Education; Westhill Training College (Birmingham).

taking the option are encouraged to do voluntary youth work during their first year, either in a youth club attached to the college, or in one of the clubs in the nearby town.

The amount of relief from their other studies that the students receive varies considerably from college to college. In some cases extra lectures are entirely absorbed into the normal time-table, in others all the work is additional load. In future it is hoped that the youth work option will not be over and above an already full course. In every case practical work in youth leadership is additional to the students' other work.

One of the students interviewed, commenting on how he arranges his week, said: 'Tonight I go and help out in the boys' club attached to the college, tomorrow I have a club committee meeting, the night after that I go to my own youth club and Friday there is a meeting to arrange the club's dance. That leaves only one night this week when I have any time to myself—I have to ignore the general social life of the college—except at weekends.' It is difficult to see how this situation could be otherwise, for by its very nature practical youth work can usually only be done in the evenings, for which compensation from a crowded time-table is impossible to give.

All this contributes to making the youth work option for enthusiasts only—there is not much space for the lukewarm on the courses—although one student I talked to did remark that she was 'only seeing it through to the end' and had no intention in taking any part in youth service activity once she had left the college. Interestingly her tutor described her as one of his star students. One wonders where along the road she became disenchanted.

This student was rare among those interviewed, most expressed great enthusiasm for the course and few doubts about its effectiveness in training them as potential youth leaders. There was little inclination to criticise either the course content or the instructors, who were generally popular people in the college, mainly because they encouraged a spirit of informality (as one might expect). The fact that there was little student criticism of the work they were doing is more disturbing. Most students seemed to accept as gospel the views of their tutors, prejudices and all. This may be partly because the numbers taking the option are small (in some colleges only four or five students in a year group) and they have the benefit of the views of only one tutor.

Students taking these courses come generally from the middle level of academic attainment. High-flyers are rare and students who are academically weak are either not allowed to start or are withdrawn by the tutors when it is found that they cannot keep up in their other work.

Why the students allow themselves to become involved at all varies enormously. Almost always they had been members of a youth club before coming to the college. Occasionally—and this is perhaps understandably more marked in colleges linked with a religious denomination (three of the original eleven)—Christian ideals of community service have motivated some students to take up the option. Most students did not know about the course before joining the college, or if they did it had little influence on their choice of college. The main motivation appears to have been that the student feels he will gain experience of young people and thereby become a better teacher.

In at least one case the spirit prevailing in the college seems to have had a strong effect in attracting students to the course. At Culham, entry is open to all and the work is entirely additional to normal studies. This session almost a third of the students enrolled for the first year of the course, and about one in four of students in the college will qualify with the youth option. As a result of the course Culham has become deeply involved in the youth services of the area. So much so that the college buildings are now used by the local clubs; activities such as weight-lifting and judo are held in the gymnasium; the craft rooms are used in the evenings for boat building, and local clubs hold dances in the college hall. At term's end there is a local youth ball run for the club members by the college. This connection with the local youth clubs is to be strengthened further by the construction in part of the college basement of a lounge and recreation room.

As one might expect these developments had (and still have) their opponents, both in faculty and among members of the college. Not everyone wants the club members on the premises. But where a college has taken up the youth-leadership idea with as much verve and enthusiasm as Culham, this development takes the logical next step and is an important experiment in social relationships.

George Dixon who runs the course at Culham is a P.E. man, and takes the view that youth clubs are not places that have any relevance to remedial work with delinquents. Plenty of youth leaders would agree with him. At the other end of the scale is David Escott, at City of Portsmouth College of Education, who is himself starting an 'unattached' experiment in the city and believes that youth clubs can make a contribution to modifying behaviour and values, or ought to try to do so. Again there are youth leaders who would agree with this.

## Contribution to Youth Service

There is no easy answer to the question of what contribution the students from these courses will make to staffing the Youth Service. In the long term this will depend on the way the service develops, with regard to things like conditions of work and salary scales. The indication from a survey carried out during 1964 by Dr Button of University College, Swansea, is that about 25 per cent of each yearly production of students qualifying with the option from the eleven colleges are each likely to give ten years' full-time service to youth work.

Since 1963 there have been about 100 students each year leaving the eleven colleges who have taken the youth option as part of their teacher training course. It is estimated that 90 per cent of them will do at least some youth work (full-time or part-time) during their teaching careers. This is an admirable result, but it is a long way from supplying all the needs of the service and it looks as if National College, Leicester, will be required for a long time to come. Many people are sceptical about the wisdom of training teachers as youth leaders anyway and would no doubt opt for the retention of National College perhaps with a two-year course. They make the point that it is important to have leaders from diverse backgrounds.

Most youth tutors in the colleges emphasise that they are training teachers first and foremost. Almost without exception they encourage their students to go into teaching first. This completes the student's qualification, allows him or her time to evaluate for himself future career possibilities. Many of the students, most of them male, are

thinking in terms of taking a joint-post job—eventually. By going into teaching they can easily assess for themselves how they will fit into such a post. In present circumstances they need to take a long hard look at what is involved.

The enthusiasm of students for these posts varies from college to college, reflecting the experience and prejudices of their tutors, and the situations they themselves become involved in during practical sessions. Students reasons for a predilection for joint posts probably reflects their desire to remain in teaching. Another factor would seem to be the amount of publicity these posts have had recently; one in five Youth Service appointments is now of this kind and many of them are unfilled. The number will go on expanding as more authorities interpret the Newsom Report into action—to the alarm of some people and the gratification of others.

There is no doubt that there are drawbacks to the joint post idea from the point of view of the teacher-leader (teacher warden, youth tutor, call him what you will) not least of them are personal ones. Usually his job involves a split day and he is free in the afternoons. To take advantage of this he must live close to the school or his free time and his salary will be consumed in travelling backwards and forwards. The amount of evening work involved on the joint-post job makes normal social life almost impossible. If the leader is conscientious and wishes to keep his club open during the school holidays (he may be asked to do this even if he is not conscientious!) he may experience difficulties in taking his holiday during term time, especially where he has even a moderately heavy teaching commitment.

There are difficulties associated with the split personality the leader has to assume. These will vary with the individual and are not made any easier if the man is young, or the school authoritarian. Said one leader: 'Half the time it's, "Please sir", "yes sir"; later on it's "Jim can I?"—do something or other; or else they do not ask you at all! It takes some getting used to at first. One minute you are a teacher in a disciplined, almost ritualistic world, the next a permissive individual trying to guide a situation that is basically disorderly. Not surprisingly most of us do not fit both situations perfectly—it would be astonishing if we did!'

This situation can be negotiated with a little tact, and even dealing with a head teacher who may be bitterly opposed to having a youth club in his school is child's play to handling the school caretaker, an individual who often makes more impact on a child than even his first headmaster. Then there is the matter of relationships with other members of staff, who may react against a junior colleague receiving a higher salary and status than they do. But there are ways of negotiating this one:

'When I took over the club I straightaway started sixteen classes. Who runs them?—members of the school staff. Who got them the job?—me! They earn nearly three quid a week extra from those classes—they think I am their guardian angel!' This is one leader's view of his recruiting efforts. Plenty of teachers take up youth work without pecuniary motive or hope of reward.

And there are other pros to match the cons. A good relationship can be established by the talented leader with prospective members of the club through contacts while they are in class. He gets to know the members'

background and can study their development. He has the advantage of knowing if a difficult boy has always been difficult or if his behaviour pattern has suddenly changed. He has friends around he can talk over difficulties with—many youth leaders are extremely isolated without the benefit of psycho-analytical staff-room chats.

Being on the staff can usually make it easier for the leader to get the use of the facilities of the school such as the gymnasium and the swimming pool, school hall and work rooms. In some cases it probably helps him to handle that caretaker! In addition there is the benefit to the pupils of the school in knowing at least one member of the staff in an informal setting.

If the teacher-leader appointment is to work successfully the balance between the two sides of the work needs careful control. A survey of youth tutors/teachers/youth leader posts carried out by Manchester University Department of Youth Work revealed that some teacher-leaders do more than 60 per cent teaching, others more than 60 per cent youth work, and that some work less than 40 and others more than 60 hours a week.

Obviously in a situation where the teacher-leader is heavily committed on the youth work side it is extremely difficult for him to prepare lessons and mark work. But where less than 50 per cent of his time is spent in his club, he will usually be able to cope very well in this regard.

Perhaps the greatest unknown of all at the moment is the career prospects attached to teacher-leadership. How will people with dual qualifications be regarded in the future when they come up for consideration as candidates for headships and deputy-headships?

No one knows the answer to this one. Those for such posts say teachers with this kind of experience will be very favourably regarded. Those against say joint-post experience is not administratively relevant.

The question what is youth work?—as distinct from teaching—is becoming more difficult to answer as the kind of schools envisaged by the Newsom Report emerge. The teacher's role is blurring at the edges. The time is fast approaching when not just some but all those working in our secondary schools will need to have a knowledge of youth work. Colleges of education introduce their students to topics and techniques related to young people outside the school, whether or not they offer a youth work option within their courses, for it is in the colleges the future of half our future lies.

*University graduates are the second main source of school teachers. How does the profession appear to the undergraduate choosing a career? How accurate are his impressions?*

# Undergraduate Attitudes to Teaching

Estimates of the demand which the education service is likely to make on qualified manpower are usually based on the assumption, among others, that school teaching will continue to attract at least the present proportion of graduates from a rising university output. It is proper then to consider in what light present-day university students—potential graduate teachers—see the career which it is assumed that many of them will choose to follow.

To this end, the Department asked the Government Social Survey to conduct a survey of university students' attitudes to careers in general and, in particular, to the career of teaching in maintained schools. The survey was conducted in the Autumn of 1963 among students in their final undergraduate year in the faculties of arts, social studies and pure science (i.e., the main "teacher-producing" faculties) of all English and Welsh universities. A random sample was drawn, consisting of one in four of the science students and one in eight of the others, and 2,745 English and Welsh students were interviewed.

About a quarter of the students (24 per cent) had already decided to teach; a similar proportion (22 per cent) were determined not to do so. The remainder—rather more than half—were neither committed to teaching nor absolutely opposed to it. Among women students the proportion intending to teach (37 per cent) was more than twice as large as that among men (17 per cent). There were also marked differences in the proportions of intending teachers in different universities, the Welsh universities producing the highest proportions (28 per cent of the men and 56 per cent of the women) and London University the lowest (10 per cent of the men and 24 per cent of the women). In between these two extremes came, in descending order, the larger English universities, the smaller English universities and Oxford and Cambridge.

## The Choice of a Career

When interviewed, about nine students out of ten claimed to have a fairly clear idea of the occupations they wanted to follow. Among these, teaching was given as first choice more frequently than any other occupation, although research in a university or some other form of research, taken together, accounted for a similar proportion. Teaching, then, seemed to be the most popular single choice of career for graduates. But research was also clearly a major attraction, especially for science students: very nearly half the men science students and about a third of the women wanted to do research.

Students' desire to make continuing use of the specialist knowledge

acquired in reading for their degrees—of which an ambition to do research was perhaps the clearest expression—was not, of course, confined to those reading science. Students generally were looking for work which would not 'waste' their degrees, but would give them intellectual stimulation and make full use of their abilities. They differed, of course, in their interpretation of this requirement. For many—particularly, as we have seen, among science students—research was thought to fill the bill; others, especially among the men, were looking for high-level administrative or managerial work, or work in one of the specialised professions, such as accountancy or the law; still others, almost exclusively arts students, wanted work in the field of communications—journalism, publishing, advertising or broadcasting. Many of those intending to teach—more commonly arts than science students—saw in teaching just this opportunity to make continuing use of their degree knowledge. In one form or another, the desire for intellectual stimulation in their work was clearly—and understandably—a major factor influencing the career choice of most students.

So, too, was the likelihood of early marriage and the early assumption of family responsibilities. For men students, this factor tended to make them look for work offering good salary and prospects, satisfactory pension arrangements and the opportunity to advance through their own efforts and not merely through seniority or the level of their qualifications. It tended, in fact, to re-inforce their interest, already strong, in questions of pay, opportunities for promotion and security. For women students, the prospect of early marriage was more likely to suggest the need for work which would combine well with family responsibilities, would allow them to resume their career after a break and would give them opportunities of employment in whatever areas their husbands' work happened to take them. It may be significant that students intending to teach—men as well as women—were more likely than other students to be already married or engaged, or to be taking the possibility of early marriage seriously into account in planning their careers.

Men students were more likely than women to be drawn to administrative or managerial work, or work in industry. Women students were noticeably less ambitious than men and relatively little concerned with questions of salary and prestige. Very many of them wanted socially useful work, involving contact with other people, which could be carried out in congenial conditions, in company with congenial colleagues.

Half the students in the survey had a preference for working in particular areas of the United Kingdom. Of these, fewer than one in three wanted to work in England north of the Wash. Among those planning to teach, however, more than two out of five favoured working in this northern part of the country. The great majority of those who were strongly opposed to teaching wanted to work in London or the south. About a quarter of all students had a strong preference for work overseas, but among prospective teachers the proportion was smaller, despite the good opportunities for overseas employment that teaching holds out.

Three-fifths of the students planned—or at least hoped—to do further training or research after graduating. Among those planning

to teach the proportion was higher—four out of five, most of whom intended to take the post-graduate teacher training course.

## Teacher Training

Seven students out of ten had heard or read something about the content of the present course, and most of them had received their information from well-informed and reliable sources—friends and relatives who had taken the course within the last three years, university training departments and the Department of Education and Science. Nearly two-thirds of these students had formed the impression that the course was very useful or fairly useful, particularly on the practical side. Where students had reservations about the training offered, these were mainly on the score that it was too theoretical. The chief improvements suggested for the course related to teaching practice: that there should be more of it and that it should be better organised. There was also some feeling, especially among women students, that the course was too long and that shorter or optional length courses should be introduced. There was no evidence that any substantial number of students was deterred from training by the form and content of the present course.

More than four-fifths of the students believed that it was important for graduate teachers to be trained; of these, about two-thirds—men more than women, and arts students more than science students—thought that training should be compulsory. Four out of five students said that if they decided to teach they would probably or certainly take teacher training before doing so, and indeed only about one student in six firmly declared his unwillingness to train. Apart from some students' conviction that they personally did not need training, the main reason for not wanting to take the course was the financial disadvantage believed to be involved. Not many students knew the effect of training on starting salary in maintained schools (at that time, an addition of £30), but most of those unwilling to train would require it to be substantially more than it actually was. (Under the new salary arrangements, training increases the starting salary by £80).

## Salaries

The survey made clear that salary was a very important consideration, especially for men students. About a quarter of the men who had abandoned the idea of teaching gave poor pay as at least one of their reasons for doing so. When men not planning to teach were asked to suggest how teaching might be made more attractive, 36 per cent of them mentioned improvements in salary. Men taking the possibility of marriage into account in their career plans frequently mentioned the need for good pay and prospects. In view of this widespread interest in salaries, it is particularly important that students in the survey were extremely ill-informed about the salaries actually paid in the teaching profession at the time (November, 1963). There was a very general underestimation of the financial rewards both at the beginning and at later stages of a teaching career.

Nearly two-thirds of the students underestimated the starting salary of a good honours graduate teacher, and nearly half the students that of a graduate teacher without good honours. Nine students out of ten underestimated the salary they could expect to receive in the teaching profession at age 35 (most of them by a margin of at least £200 to

£250) and about three-quarters similarly underestimated their expectations as teachers at age 50 (most of them by a margin of £350 or more). Most students considerably underestimated their real chances of receiving additional allowances at an early stage in their career, and a high proportion mistakenly believed that there were different salary scales in schools of different kinds. There was thus a very general ignorance of the facts in a field which students themselves believed to be particularly important.

## Teaching in Different Kinds of Schools

All students were asked, irrespective of their actual career intentions, to rate how they felt about teaching in various kinds of schools and at different levels. The most popular choice was teaching in grammar schools at sixth form level; then, in descending order of popularity came grammar school teaching below sixth form level and teaching in comprehensive schools (almost equally popular); teaching in independent schools, which was only slightly more favoured than teaching in secondary modern schools; then the teaching of juniors and finally the teaching of infants.

Irrespective of the kind of secondary schools students had themselves attended, grammar schools tended to be the most popular to teach in; for those who had attended independent or direct grant schools, teaching in independent schools was the next most popular, but the least popular of all forms of secondary school teaching for those who had themselves attended maintained schools. The most common objection to teaching in independent schools was an objection in principle to their existence. Teaching in secondary modern schools received an almost equally low rating whatever secondary school had been attended.

Understandably, the attitude to teaching in all kinds of schools was more favourable among the intending teachers than among other students. Students in all categories, whatever their attitude to teaching, their faculty or their sex, tended to regard primary school teaching, and especially the teaching of infants, as the least desirable form of teaching. As might be expected, this view was held more strongly by men students than by women.

It was clear that the most attractive feature of grammar school teaching was the relatively high standard of the work, and that the most common objection to teaching in other kinds of maintained schools was the relatively low academic standard. Indeed, to many, especially science students, even grammar school teaching would represent too great a regression from the academic standard they had themselves already attained.

## The Prospects for Recruitment

Teaching seems to be very well suited to the career aspirations of a large proportion of women students. It is an occupation which is readily adaptable to the requirements of marriage; it is socially important work; it is believed to offer the advantages of congenial colleagues and working conditions and although women students in the survey shared the general tendency to underestimate its financial rewards, they were relatively unlikely to be dissatisfied, even with the

quite low pay and prospects they mistakenly believed the teaching profession to offer.

There seem to be reasonable grounds, then, for believing that the teaching profession will continue to recruit a high proportion of women graduates. The survey indicates, too, that some men graduates will continue to be attracted into teaching by its social value; its working conditions; the opportunity it gives to make continuing use of specialist knowledge; and perhaps also by the security and pension arrangements that it offers. Attention must focus, however, upon the large number of uncommitted students, those who were neither decisively for nor against teaching. What were the reasons for their indecision? More particularly, what are the prospects that their views will change?

A quarter of the students said that the likelihood of their teaching would depend partly on the class of degree they obtained. Some of these, it seems, would be prepared to take up teaching with a good honours degree, but five times as many would consider teaching only if their final examination result were sufficiently disappointing—a striking indication of the low esteem in which teaching is held by many students. Nearly half of the students who were not planning to teach had at one time seriously thought of doing so. The survey found little evidence that, in the main, students were influenced against teaching by any of the people whose advice on careers they would normally be expected to seek—their parents, the staff at their schools and the academic and appointments staff at their universities. Nevertheless it is evident that during the course of their university career students were far more likely to abandon an earlier inclination to teach than to form a new intention of doing so.

Their reasons for turning against teaching were varied, the most important being the decision that they were personally unsuited to the work or lacked the necessary vocation for it; the view—as we have seen, a grossly exaggerated view—that pay and prospects in teaching were poor; and the opinion that teaching was constricting and monotonous work which would waste their degrees and give them little or no intellectual satisfaction.

The view that they were personally unsuited to teaching was often expressed by students, especially women. The survey does not give any reason for supposing that the proportion of women graduates entering teaching, already large, will be very much increased. The graduate teacher force can be given substantial reinforcement only if more men decide that teaching offers what they are looking for in a career. Here, the evidence of the survey is that for most uncommitted men students, teaching fails to satisfy the three criteria—pay, opportunities for advancement through their own efforts and the intrinsic interest of the job—to which they attach particular importance in choosing a career.

Pay and promotion opportunities are, of course, inextricably linked with status. It is impossible to know, but not impossible to surmise, how much the low rating given to teaching by men students in the survey was condition by the fact that they so badly under-estimated the actual levels of graduate teachers' earnings. It would be a pity if efforts to improve the pay of the teaching profession had unwittingly created a false impression of teachers' penury and, in doing so, had denied the profession some of highly-qualified reinforcements. But if so, the

remedy is clearly to acquaint students with the true facts. The announcement of new salary scales last summer has given the opportunity to do this.

It is much more difficult to combat the notion, widespread among uncommitted men students, that teaching is a dull, unworthy job. It must be remembered, however, that teaching probably suffers in students' eyes simply because they think they know so much about it. They may see teaching as the mere regurgitation of knowledge, and undervalue the technical skill required. Some of the discontent with the school situation which they ascribe to teachers may be simply a reflection of their own. Then again, they may compare their own observation of elements of real tedium in the teacher's job with the imagined glamour and excitement of other occupations which they have not seen at first hand. Teaching undoubtedly includes its share of tedium and frustration—but few occupations, if any, do not.

Objectively, it is hard to see how tedium can be the dominant characteristic of the teacher's job in future circumstances. The whole education service is in the process of major and far-reaching development, and the pace of change is rapid. Different patterns of school organisation are being evolved. New teaching methods are being introduced. There is a fresh approach to examinations, especially to the teacher-controlled examinations leading to the Certificate of Secondary Education. The employment of a whole range of mechanical and electronic aids is bound to have a growing impact on the teaching process. Educational research is expanding, and teachers should have increasing opportunities to take part in it and to profit by its results. There can be no doubt about the need for graduate teachers in this complex, varied and developing field. The schools will certainly need many more, not only in their traditional role as teachers of academic subjects to the ablest children, but at all levels. In the primary schools, educational experiment is flourishing; in the secondary schools, the task to be accomplished, already very much in train, is to evolve school organisations, curricula and teaching methods which will allow all children to have the fullest possible educational opportunities.

In this context of new thinking, re-planning and experiment, there is scope for graduates of high quality to follow satisfying careers. Education is of great and growing importance to the community; it would be a matter of concern if some of the community's ablest young men and women mistakenly undervalued it.

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Copies of the full survey report on which this article is based, *Undergraduates' Attitudes to School Teaching as a Career* (*English and Welsh Students*) may be obtained from the Librarian, the Government Social Survey, Atlantic House, Holborn Viaduct, E.C.1., (price £1).

*This article describes work being done as part of the University of Birmingham programmed learning project, supported by a grant from the Department of Education and Science. One of the conclusions reached is that expensive and complex equipment is not essential to the programmed method.*

# Developments in Programmed Learning

GEORGE LEITH, *University of Birmingham*

A manual of infant teaching methods published in 1908 contains the dogmatic statement that '. . . the teaching of writing like all other teaching in school must be *class* teaching'. The book goes on to explain that every child must write simultaneously to ensure that everyone keeps in step, and that a child who has been absent must leave empty pages on the exercise book, '. . . which may illustrate . . . the blank which absence must always leave in regular education'. Since the days of that book we have come to recognise and make provision for individual differences of many kinds, whether by selection and streaming or by group methods and individual use of apparatus and materials. One such approach is programmed learning.

Programmed learning has developed as a result of a number of trends in educational practice and theory. E. L. Thorndike's work in America made teachers aware of the need for systematic topic analysis. He was also responsible for showing the importance of giving pupils immediate knowledge of their success during practice exercises. A third influence was the diagnostic testing and teaching movement which aimed to discover why children were making errors and give remedial teaching to overcome deficiencies in learning. Professor Schonell was its leading exponent in Britain. At the same time American teachers were reappraising the effectiveness of their work. In order to find how much their pupils were learning it became necessary to define the particular aims of a course of teaching in a way which could be assessed objectively.

All these developments were brought together by a number of educators and psychologists in America who had been working on problems of learning and teaching. The outcome of their work was a method of preparing self-instructional materials, which in essence involves: a detailed specification of what the pupils should be able to do after being taught; a breakdown of the learning tasks needed to reach the objectives; provision of apparatus for active involvement in learning with immediate knowledge of results; and try-out and revision of materials until they teach successfully.

Many teachers have become acquainted with the linear and branching forms of programmed teaching which allow pupils to learn at their own individual pace. Linear programmes consist of material which is carefully analysed and organised in a sequence of relatively small,

progressive steps devised to prevent mistakes. Branching programmes, on the other hand, present larger steps and offer alternative answers to a problem, one of which is correct, the others being diagnostic of errors which, if made, are at once rectified by 'branches' of the teaching material. Advocates of programmed learning stress the advantages for a pupil of working at his own rate, having immediate knowledge of success, and learning from material which leaves no gaps in its exposition. Their critics, however, claim that children should not work in isolation from each other, that the method is almost entirely verbal or symbolic and that many pupils become bored because they no longer feel challenged. Another difficulty is the apparent need for teaching machines to prevent pupils from looking ahead at the answers before they try for themselves.

The aim of this article is to show that the limitations complained of are not inherent in the methods used in programmed learning. It will indicate ways in which programming techniques have been extended and question the need for teaching machines. Programmed learning is, in fact, a set of techniques for so preparing and arranging learning tasks that the aims of the teaching will be achieved. There is no reason why programmed instruction should be confined to linear and branching models and solely to verbal materials. The materials may be films, TV, practical work, language laboratories, personal teaching, paper programmes, models or any other techniques alone or in combination, so long as they can be revised and improved as a result of preliminary trials.

## Teaching Machines

The teaching machine is a stumbling block to many teachers who would otherwise accept programmed methods. One of the chief claims made for machines is that they are thought necessary to prevent children from looking ahead at the correct responses before they attempt to answer. The initial outlay of a hundred pounds to equip each child in a class with even the cheapest device deters teachers from using them. Besides their cost, teaching machines present other problems to the teacher. One of these is the fact that there is no standardisation of machines. There are at least eight different *kinds* of presentation size and medium ranging from 35mm. film and microfilm to varying types of paper whether fan-folded, in rolls or on sheets and cards—again of several different sizes. Consequently a machine user is confined in his choice of programmes to those which fit his machine.

Because of these problems of cost and lack of standardisation, we have carried out a number of experiments to find how far anticipating or working out the answers before confirming them gives better results than looking ahead. Research reports both British and American, give strong support to the view that as far as most pupils are concerned looking ahead (so-called 'cheating') does not detract from learning.

In Kesteven College of Education, students received a term's teaching on education psychology, some being given their programmes by machines, others having the programmes on duplicated sheets. The same average marks were obtained by both groups of students on tests of recall and retention. First year Latin is another subject which was taught by programmed texts and machines. Two Birmingham

grammar schools have given four out of five lessons a week by programmes over a period of a year. In this experiment some children used machines to prevent looking ahead, then transferred to programmed texts. Other children began their course with texts and later changed to machines. A third group learned from the programmed booklets only. After a term when the changeover was made, the children were tested on their knowledge of vocabulary and syntax and given translations to do. There were again no differences in test scores.

To make the conditions more extreme, grammar and secondary modern children from another two schools in Birmingham were taught concepts of probability. Some of these children learned by making their responses before checking the right answer, while others were instructed to look at the answer *before* trying to work it out. In this experiment, too, the groups achieved exactly the same high levels.

The most stringent test is to make sure that the answers are indeed looked at first by inserting them in the answer spaces of the programme frames. This has been done twice with the same results. In a Warwickshire high school (i.e. secondary modern), after tests to show how much pupils already knew about the content of the programme on English sentence structure, equivalent groups were given programmes with the answers provided for them or were prevented from looking at the answers until responses were made. Even after ten weeks the amount of knowledge gained from the programme was no different. The same result was obtained in a Birmingham grammar school. Third, fourth and fifth form pupils worked in the ways just described on a co-ordinate geometry programme, 'cheaters' and non-cheaters achieving the same average marks.

It seems clear from these experiments that programmed text-books are an adequate medium for programmed instruction. This fact increases the scope of programmed teaching enormously. It makes it possible for students to work from their programmes at home (the prospect of carrying up to 80 lbs of machinery would be daunting), and receive frequent guidance upon their progress. This will be of great benefit to many evening students who often receive their work, return it after a week, and obtain the corrections a fortnight later. Sets of programmes can be obtained at almost the price of textbooks rather than having only a few machines available for pupils to share on a rota basis. Moreover, programmes can be made available for individual or group assignments without the need to consider whether the programme fits a given machine.

It is to be expected that properly constructed programmes should, indeed, teach. There is no need to insist on repeated trials of strength between classroom teaching and programmed self-instruction. Instead of the general question 'Is programmed instruction as good as classroom teaching or lecturing?' questions should be raised about the particular ways in which teachers can use programmed learning and the most effective methods with specific age and ability groups.

As typical of experiments which have compared the learning of subject matter by 'live' teaching and programmed methods, two investigations are described: one at training college level, in psychology; and another in secondary modern schools, in economic history.

Some students in a year group in a college of education were taught educational psychology, some by programme, others by means of lectures given mainly by the programmer, and using the same material. At the end of the learning period of one term the students were given objective tests and wrote essays. Those learning from programmes achieved higher scores (though not significantly higher) than the students attending lectures. (Moreover, they took less time). After a period of retention the difference in score was maintained.

The history of trades unions was presented in two secondary modern schools to pupils in the fourth year. Randomly assigned groups were taught by the programme and the other groups by the programmer, who made detailed lesson notes to ensure that the substantial content of the teaching was the same. As in the former experiment the teacher had the experience of programming the subject matter as background to his lesson preparation—a process which weighed in his favour. In this case, too, the difference in the results of the teaching was insignificant but the programme learners needed only two-thirds of the time taken by their class-mates taught by the teacher.

## Linear or Branching?

Teachers who decide to use or to write programmes may find it difficult to make a choice between linear and branching methods. The linear style provides the same sequence of frames for every learner, usually requires composed responses and progresses by relatively small steps to avoid errors. Branching programmes (with few exceptions) present multiple choice selection problems following large-step frames, and direct the learner to different programme sequences depending on the kind of answer selected. The theoretical arguments between proponents of each method concerning the need to prevent errors being made in the first place or, by contrary, the importance of detecting what misunderstandings a learner has in order to remedy them, give little practical guidance to the writer or user of programmes.

In two experiments in secondary schools in the Midlands and on Tyneside, one on English, the other on electricity, children reached the same level of attainment with both linear and branching programmes. The latter study examined also the learning of children in the lower part of the ability range and obtained the same result. The electricity programmes were also given to 10-11 year old children (for whom they were written). In this case children who were of above average intelligence were not differentiated but those who were of lower ability learned better from the linear version. An identical result was obtained in testing linear and branching programmes on geographical concepts with children of eleven in two junior schools. Those above a mental age of eleven did not differ while those under mental age eleven fared better with the linear programme.

Pupils who learned from the branching programmes took less time to complete the branching programme than that required for *writing* answers to the linear one. Merely reading the linear programme, however, proved as effective as this with children above average in ability and took about the same length of time as the branching programme.

In many of our experiments we have found that there is no need for the children to make written responses. This is because the kind of practice

needed is in forming judgments, classifying and contrasting. Only when new responses are to be learned or discriminated does it seem necessary to write down the answers.

One important aspect of primary school work felt to be lacking in programmed instruction is social learning. Children need to work in groups so that they may learn to co-operate, as well as to take advantage of the different abilities possessed by individual children. Practical classroom activities are also essential. These needs have been met in a programme for 9-10 year old junior children on magnetism. Groups of four children were formed, each having a wide range of ability. These groups had a kit of apparatus for carrying out practical work and experiments in magnetism. A leader was chosen by lot and each child was assigned a colour. When his colour appeared on a set of frames in the programme a child was instructed to do something, to read, or to make observations and notes, so that the whole group worked as a team. From time to time an asterisk in the programme indicated that a problem should be discussed. The leader collated the points made. By these means the experiments were carried out and poor readers were helped to read the programme (aloud when so instructed) by their colleagues. A comparison with individual use of the programme (with appropriately altered directions) showed that the group method was the more successful whether children were of above average, average or below average intelligence.

Practical work has also been integrated into a programme on density, volume and specific gravity for first year secondary modern children in Gloucestershire. The programme instructs them to handle standard-sized pieces of different metals, fit them into spaces in a wooden frame, measure displacement of water and so on. The concrete experiences so gained are used to guide the learners to formulate concepts and to test general statements. This programme, too, is being adapted for group use.

In language teaching and in reading, oral experience is considered necessary. To give this experience in an Abergavenny grammar school a language laboratory has successfully been used as part of a programmed course in Latin. Tape recorders have also formed part of the programmed teaching of reading, both at the beginning stage and again for remedial purposes.

Laboratory apparatus, specimens and models (e.g. polystyrene models of molecular structures), clockfaces and coins, tape-recorded oral instruction and passages of music have all been used to give tangible, visual and auditory experience during programmed learning.

In another experiment programmed instruction was seen as a means of promoting effective discussion and reasoned argument. The classroom debate often loses impact because only the main speakers are well versed in the subject of the motion and frequently even they know only one side. To ensure a more effective discussion the background was given in the form of a branching text (which is ideally suited to areas where opinions conflict, since each opinion can provide a response leading to a different branching sequence). Programmed learning is not antithetical to group discussion, creative work and practical activities. There are capable of an integration in which one kind of activity supports and reinforces another.

One of the limitations of programmes has been the relatively small amount of material presented at a time in one frame. Especially when machines are used this can restrict not only the range of relevant subject matter but also the power to scan or present something as a whole. A similar problem arises in the field of objective testing where each item is relatively short. The solution adopted in one instance is to present a whole passage, a map, a collection of data, etc., and use short objective test items to assess comprehension, ability to interpret, to arrange data, to draw conclusions and so on. In the same way a programme may incorporate one or more 'panels' which include much more than can be given in one frame. The frames are then used to guide understanding or interpretation, and promote problem-solving.

Panels can also be used to give an introductory survey, a summary, or even, if a test is given after the panel, as a means by which some pupils can be allowed to by-pass the ensuing frames. The use of apparatus can be regarded as extending the idea of a 'panel' into three dimensions.

Because it is fundamentally a body of techniques for finding where a teaching sequence can be made more effective, programmed instruction is indefinitely adaptable. For this reason it would be mistaken at this stage to attempt to define standards of frame size, presentation medium and methods, or to assume that only a limited range of subject matter is capable of being programmed.

## The Role of Programmed Instruction

As a guide to the uses of programmed instruction the following suggestions are made.

Many teachers have used programmes to cover basic course work. One motive for this is to economise in the teaching of lessons which have to be repeated several times to different groups because of time-table difficulties, sandwich course arrangements and so on. Another motive is to save time which can be used to give richer knowledge through personal teaching. There are also topics which always present difficulty to the learners—even when additional lessons or tutorials are given. In such cases a programmed approach can be successful. Sometimes, too, shortage of staff or of teaching time has led to the successful use of programmes.

At the beginning of a course or when starting a new stage of education pupils are often found to have different amounts of knowledge, to use different methods and to make different kinds of mistakes. A programmed introduction ensures that they all begin at the same level. Remedial teaching can also be carried out by means of programmed instruction in the basic subjects as well as in other areas of deficiency. Improvements in attitudes to school have been found as a result of such teaching as well as improvement in skills.

Another way in which programmes can be helpful is in teaching ancillary topics such as the use of the slide rule or prosody or Latin terminology.

Work which is normally unsupervised such as private study and homework, especially for students at evening institutes who may have a long period between the setting and marking of work, can usefully be given in programmed form.

Group work, in which pupils may be working at different levels, speeds or topics, benefits from the use of programmes. Pupils who are

always ahead of the others can, for example, be given self-instruction on further topics to enrich and amplify their learning without encroaching on later basic work. Many language teachers see a place for programmed audio-lingual teaching not merely based on pattern drill and imitation but in contexts which are programmed to facilitate conversation skills. Again, where more limited objectives, such as the rapid acquisition of reading ability, are to be realised, a programmed approach, including some oral practice, can facilitate learning. Other roles for programmed learning are: in hospital teaching; to teach absentees rapidly what they have missed; for correspondence courses; and with handicapped children such as spastics who can use teaching machines but find books difficult to handle.

When educational television is more widely used for initial teaching, whether by closed circuit or in a local area by a national system, programmes will be found useful to follow up the broadcasts. The most ambitious suggestion is to use programmes as one component of a planned course in conjunction with other methods and media like film or television, lectures and demonstrations, laboratory work, visits, field study, discussions and tutorials. This could easily be a team teaching project for several teachers and classes or schools.

Because of the rapid developments in technique, problems of introducing programmes and the lack of opportunity to benefit from others' experience, courses have been set up on the writing and use of programmes. Apart from the consideration of types of programme, frame writing and validation, the essential features of such a course include: practice in setting objectives; test construction; topic analysis; analysis of learning processes involved; curriculum study. Ideally teachers should attend a full-time course of instruction in programme writing. It is extremely difficult for a teacher to carry out his normal duties and simultaneously work at programming. Several local authorities have, in fact, granted secondment to teachers for two or three days a week or for one week per month. During this time it is important that programmers should meet to exchange ideas and criticisms and receive guidance from a tutor.

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## Centre for Research and Documentation in Programmed Learning

The Department of Education and Science has invited the Education Department of the University of Birmingham to set up a Centre for Research and Documentation in Programmed Learning with the purpose of co-ordinating work in this field.

One of the services the Centre will provide will be the compilation of annotated bibliographies of published programmes. Records of unpublished programmes will also be of value to teachers who are anxious to avoid duplicating well-tried work or to those who wish to offer facilities for field trials.

Pamphlets and abstracts of research being carried out in Britain and monographs explaining and illustrating techniques of programming will also be prepared by the Centre.

*Living in flats, lodgings, halls of residence or their parents' homes affects students in different ways. This article looks at some of the factors involved.*

# Where Should Students Live?

To live in a community of scholars has long been an ingredient—to some an essential ingredient—of higher education. How important will it be in the second half of the twentieth century?

Here is the formal view of the University Grants Committee:

> . . . it is our belief that he (the student) should mix with his fellows and seniors under conditions which give him great encouragement to appreciate and discuss matters of the spirit and of the intellect at the highest level of which he is capable. Here we mean, according to aptitude and tastes, religion, art, music, politics, current affairs, and the relationship between human beings, to mention but a few.

Yet it must be admitted that this high expectation is sometimes disappointed. Boswell has recorded that he did not find Johnson had formed 'any close intimacies with his fellow-collegians' during his three years at Pembroke College, and in the same century Gibbon found the society at Magdalen College positively distasteful:

> I was admitted to the society of the fellows, and fondly expected that some questions of literature would be the amusing and instructive topics of their discourse. Their conversation stagnated in a round of college business, Tory politics, personal anecdotes, and private scandal.

The thought was echoed two hundred years later by a student—according to Marris in *The Experience of Higher Education*—at a college of advanced technology:

> . . . it's mostly talk about motor cycles and cars, we come back to it again and again. If you raise anything else they think you're a funny lad. As soon as you go to any depth, they lose interest. A discussion takes birth—someone makes a remark, someone else makes a remark—and then it dies, and you go back to motor cycling.

But the experience of shared intellectual excitement is there to be found, and the same report, ranging more widely, concedes that 'of all the conventions of student life, the discussion of serious questions, sometimes long into the night, seems most universally honoured'. The phrase echoes what was written of William Morris at Oxford a century ago: 'Evenings of excited talk and reading slid into the long nights . . .' Morris had found his soul-mates whose 'bond was poetry and indefinite artistic and literary aspirations'. It was another poet, Stephen Spender, writing later of his experience at Oxford in the Thirties, who summarised the situation at that time in these words:

> . . . since a large proportion of the most promising young men of the English middle class were sent either to Oxford or Cambridge, it was inevitable that little groups of people who were lively and intelligent should spring up every year. Oxford provided a meeting-ground for youthful geniuses, and that, apart from its vast machinery of learning which was accessible to those who wanted it, was perhaps its most useful function.

This may still be one of the most useful functions of higher education, in all its forms, with the difference that talent is now recruited more widely than by Oxford and Cambridge in the Thirties. Residence in college or hall still has its attractions for some, but the twentieth century has some other answers to the question of how students should live, and all have their advantages—and disadvantages. An architect with experience of several universities has said that the 'Oxbridge-inspired hostel idea' is 'now increasingly under fire, particularly from students who dislike their institutional and socially restrictive flavour and find the smell of prolonged adolescence inappropriate and distasteful. They ask—rightly in my view—for more variety of accommodation—hostels maybe, but flats and bed-sitters too. They chafe at the idea that students are a 'separate' breed. They believe that mixing staff and students is artificial'.

Marris has summarised the situation as follows:

> Colleges or halls are the most sociable and distracting; flats the freest and most time-wasting; lodgings at their rare best a satisfying compromise, with home comforts, a few congenial friends to hand, and authority and social distractions at arm's length.

And some students live in their own homes, although these are a declining proportion of the total, and the arrangement is likely to appeal least to those who associate higher education with an experience of greater independence.

## The Pattern of Residence

Taking all students in higher education together, two-fifths in 1962 lived in lodgings, a third were in residence in college, hall or hostel, and a quarter lived at home. But the proportions were very different as between universities, colleges of education, and further education. The proportion in residence, for example, was highest at the colleges of education: 64 per cent, as against 28 per cent in the universities and as little as 6 per cent in the technical colleges. For the latter the proportion living at home was the same (47 per cent) as for those in lodgings, compared with 20 per cent in the universities and colleges of education. The present situation of residence in the universities was summarised by the Robbins committee as follows:

> The pattern of residence in different universities is determined partly by their location and partly by their traditions. The ancient English universities, unlike those in Scotland, were established away from the main centres of population and they still have very high proportions of students in residence. The Victorian universities were founded in the great cities and did not originally aim to provide for communal living. The newer universities are mostly in rather smaller cities and have attempted, by providing a good number of halls of residence, to avoid what some of their founders considered to be the short-comings of the older universities.

The proportion of university students in residence has remained remarkably constant, despite an increase in numbers from 50,000 before the war to 113,000 in 1962. The constancy of this proportion, coupled with a decline in the proportion living at home, has meant a comparatively large increase in the number of students in lodgings. From a third of the total in 1939 it has now risen above a half and is likely to rise further.

Living in lodgings is in fact becoming the characteristic mode for students in the second half of the century, and a further shift in this

direction is likely to occur. So great is the demand for places in higher education that the necessarily limited funds for new building have been largely concentrated on the provision of teaching space. The planners of new universities have been debarred from using their initial grants from the public purse to build residences, and some have appealed for industrial support for such provision. Almost all universities are now engaged in a search for more lodgings of a suitable kind, where there is provision of quiet private study and meals at suitable times. In some of the older university cities there is a tradition of university lodgings, but with the increase in students expected in future years there will be opportunity for many more homes to provide this kind of service with some personal as well as financial satisfaction.

Among the reasons given by landladies for preferring students to other lodgers are the long and regular holidays, the backing of the university authority should need arise, and a liking for young people and their company. There is sometimes a preference for men students, in the belief that they are tidier, less fussy, less moody, less extravagant with hot water, and do not festoon the bathroom with drying clothes. Some landladies however prefer feminine company. University lodgings are normally subject to inspection by the college authorities, who maintain a list to which new students may refer. All require bed and breakfast or bed with cooking facilities, except in a few lodgings near to the college where bed only may be accepted as sufficient. Many require the provision of all week-end meals and some evening meals. The difficulty of finding satisfactory accommodation has driven lodging officers to go further afield in their search; and it is becoming quite common for students to live six or seven miles from their university.

For overseas students the lodgings problem is even more acute. In 1950 there were only about 10,000 such students, mostly at the universities of Oxford, Cambridge and London. In 1963-64 there were more than 64,000, a fifth of whom were at universities, the rest at colleges of education and further education or training in industry and in hospitals. For the vast majority home is unattainable, even during vacation, and some arrive accompanied by wives and children. Residence in hall or hostel, even with the special arrangements made for overseas students, can provide only for a small proportion. For the majority the answer must be lodgings, a solution often complicated by difference of race, language and way of life.

A room in which to study can often be the basis of a student's years in higher education. Those who live at home are most likely to do well in this respect. A survey of university students in 1962 showed that seventeen in twenty of those living at home had a room of their own to work in, as against fourteen in twenty of those living in college, eleven in twenty of those living independently in lodgings and seven in twenty of those with board and lodgings. The importance of this factor in the student's life may be judged from the fact that on average undergraduates spend a good deal more time (perhaps twice as much) studying where they live than in libraries.

For students in colleges of education the situation is very different. The pattern here is predominantly residential. This has always been so, though the system has not always been without its critics. About a century ago the principal of a training college saw the disadvantages in this way:

> Students in training school are, considering their age and circumstances, too gregarious; they live too much in a mass. They study together, they take all their meals together, they occupy a common room in the intervals of recreation, they have no privacy, they are scarcely ever alone except when in bed. Hence there is little opportunity for self recollection or private meditation . . .

The picture was probably a little over-drawn, even then, and today would do scarce justice either to the pleasures of companionship in the colleges of education or to the opportunity for privacy afforded in agreeable study bedrooms. According to a 1962 survey students in the colleges spend on average twelve hours a week in private study in their living accommodation compared with one hour at all other places of private study. Students usually live in college for part of the course and in approved lodgings for the remainder of the time. With the coming build-up in student numbers in the colleges there will be an almost certain increase in the proportion of students living in lodgings at any one time. The colleges are now welcoming increasing numbers who can live at home and attend as day students. A growing number of colleges are in fact for day students only and some are intended especially for older people—in London, Manchester, Brentwood, Chorley, Swinton, Leeds, Newcastle and Wolverhampton.

Students at technical colleges already mostly enjoy good conditions for study by living in their own homes. This is preferred by some on the additional ground that it is good to keep their academic and their social lives apart, sweeping aside the educational philosophy in which residential universities put their faith. Students at one college of advanced technology reported that by living at home they 'enjoyed good food, their laundry was attended to, most of them had a room of their own in which to study—and the fifth who had not were usually left in peace . . . two-thirds felt that their families co-operated wholeheartedly when they needed quiet for study, and relieved them of any irksome household tasks'. Where stresses arose from living at home they were apt to be of a different kind:

> To most students their parents' home seemed inhibiting, not so much from the superficial constraints of regular meal-times and social obligations, but from the disparagement of their claim to adulthood, the projections of their parents' unrealised ambitions, the clash of belief, or the lack of mutual understanding and common interests.

Such harrassments are the by-product of an age-old clash between the generations, made sharper in our own time perhaps by the pace of change—and the first exposure of some families to higher education.

The whole subject of student residence is beginning to attract the attention of educational researchers, and the newly-founded Society of Research into Higher Education devoted a full day at the end of 1965 to airing the findings of sociologists, pyschologists and others. If the main effect of research so far has been to put a statistic on facts any reasonable person might have guessed, the conference was undoubtedly useful in identifying some of the problems and suggesting new lines which researchers might take. Not the least of the problems cited was how to strike the right balance between what students would like and what would best contribute to their higher education—which, among other things, is concerned with changing their preferences. And when that balance has been struck the question remains how far what is desirable may be matched by what is possible.

*The German equivalent of our* GCE *Advanced Level examination is the* ABITUR. *Teachers assess their students and the examination is conducted internally in the schools.*

# The Abitur Examination in Germany

BASIL E. THOMAS

In German grammar schools there is only one examination, the *Abitur*, an internal examination taken at the end of the thirteenth school year, at about the age of 19. The only other school qualification a pupil can acquire is the *Mittlere Reife*, a certificate awarded to pupils at 16 and based not on any kind of formal examination but upon the teachers' assessment of the pupils' school work.

The *Abitur* is an internal examination conducted entirely by each individual school in co-operation with the Ministry of the particular *Land*. Its main purpose, traditionally, was to test the suitability of the pupils for following courses at the university, and this, in spite of its much criticised use for other purposes, is still its main purpose, and most of the pupils do in fact go on to university study.

The *Abitur* has a long history in German education and as a mode of examining it was already well established in the nineteenth century. During the last twenty years the forms and concepts of education, not least those of secondary, including sixth form education, have been and still are the subject of lively controversy in the German Federal Republic and many of the questions raised—pressure in the sixth form, specialisation, and the need to bring the range and content of sixth form work into line with the modern situation—are not unfamiliar to us in Britain.

Far-reaching changes have been made during the last ten years, particularly in reducing the number and the content of subjects in the sixth form (for many years pupils continued with as many as thirteen subjects right up to the *Abitur* examination). The attachment to the notion of a general education remains as strong as has been traditionally the case—the universities insist that they do not want ready-made specialists but students with a good general education—but room has been found for a limited degree of bias and choice in the curriculum of the upper forms. Briefly, all pupils in the sixth form have to study German, social studies, music or art, religious knowledge and physical education; pupils in the science form do mathematics, physics, a foreign language and an additional chosen subject; in the arts form, mathematics, two foreign languages, some science and an additional chosen subject. Although all pupils do mathematics, a science, and one foreign language, these will be done at different levels for arts and science students respectively, but without distinction as to their importance. In the classical gymnasium, Latin and Greek (or French) will be the two languages in an otherwise similar curriculum.

It is one of the virtues of an internal examination that it can, without difficulty, be made to follow changes in curricula and content. In 1960 the Conference of Ministers of Education of the Federal Republic agreed upon a number of measures designed to lighten considerably the burden of the examination and to reflect at the same time changes made in the scope and content of sixth form work, without altering significantly the traditional structure of the examination as a technique of examining. The 1960 resolutions apply to the whole of the Federal Republic, and though each *Land* has its own separate regulations in detail, the account given below of the *Abitur* in Hessen applies in its main outlines to other *Länder* of the Federal Republic.

Successful pupils in the *Abitur* obtain a certificate which gives them the right to enrol and study at any university in the Federal Republic (and Berlin). The leaving examinations from all schools are equal, not only before the law but also as regards social prestige and admission to university. This, and the fact that there is no pecking order among German grammar schools (nor among universities) makes it unimportant for boys and girls in which part of Germany they live and whether their parents have money.

The student is entitled to enter any faculty whatever his subjects in the *Abitur*—it is not uncommon for a student to take two or three terms at the university before he finally decides what will be his main subject. It is central to all thinking in Germany about the sixth form and the *Abitur* that by 'suitability for entry to the university' is meant not the extent of a pupil's specialist knowledge nor the range of his factual knowledge in general but rather his ability to think in different fields.

Sixth form methods of work—as far as one was able to observe them—and the selection of material are designed explicitly, to promote this end, and the *Abitur* examination is similarly designed to test this kind of educational experience. No attempt is made to test a pupil's detailed knowledge of a syllabus; there is complete and rigorous exclusion of any questions which require the reproduction of facts as such, and cramming is impossible. Instead, the aim is to test the candidate's ability to handle ideas and his way of approaching a task in a given field. Whether it is a fully satisfactory test for its purpose raises issues which would require further discussion and investigation, but what seems beyond doubt is that it discourages and even excludes mechanical learning of facts and encourages thinking and discussion.

Although German educationists have shown themselves accessible to the ideas and experience of other countries—and some of their reforms illustrate this—they remain firmly convinced that the aim of testing a pupil's fitness for further study requires a more individual mode of examining than is possible through a common centralised external examination, whatever virtues may be claimed for the latter. (Support is even forthcoming for the abolition of the matriculation examination—the *Abitur*—and the granting of a matriculation certificate on the basis of the report given by the teachers of the top form.) For this reason the examination is an internal one to each school, in which individual tasks, oral examination and the previous record of work of the pupils play an important part in the final assessment, the whole examination being conducted by the school examining board, under the general supervision of the Ministry. No pupil is admitted to the final year of the sixth form unless his performance in the previous year

(*unterprima*) has been satisfactory. The failure rate is therefore very low, perhaps as low as 2–4 per cent; frequently all the pupils of a school pass.

## The Examination

Before the examination begins an examining board is set up to conduct it, consisting of all the teachers involved in teaching the pupils during the last two years of the sixth form. A representative of the Ministry (usually the senior inspector), takes the chair or, if he is unable to be present, the headmaster presides.

The form-master writes a fairly extended report on each candidate, not only on his school work but on personality, special interests, difficulties of health or of family circumstances and intended career. This is circulated to all members of the examining board who may add something if they wish. The final version is placed in the examination file of the candidate. To this file is added a *curriculum vitae* drawn up by the candidate. At a conference of the sixth form teachers, a mark or grade is given to each pupil in each subject, based upon an evaluation of the pupil's class work during the previous two years. Some weeks in advance of the examination the school sends a list of proposed questions (usually from three to six) to the Ministry representative. The latter chooses one question (or two if there is to be a choice) and returns it to the school in a sealed envelope which is opened by the headmaster in the presence of the candidates on the morning of the examination.

The written part of the examination consists of one paper in each of four subjects, and this usually requires one question to be answered; a single question in mathematics may be sub-divided into three. Each school is free to submit its own questions to the Ministry of the particular *Land*, these must conform to the general requirements that they 'lie within the fields outlined in the general syllabuses issued to the schools,' do 'not demand mere knowledge of facts but rather offer the candidate the opportunity of demonstrating his method of approaching a task, his intellectual maturity, his capacity for clear thinking and relevant self-expression,' and 'are not so closely related to a task already studied in class as not to require fresh independent thinking.'

It is consistent with the view that the examination should test the candidate's ability to think, that the time allowed for answering the one question in each subject should be ample, *viz. five hours*. The candidate is advised by his teachers to spend half of this time on a rough draft of the answer and the second half on a finished version of this draft, with time for scrutiny and last thoughts. It is considered by the Germans that this kind of time allowance, for one question, is enough to relieve the candidate of any sense of pressure, and to give him a real opportunity of doing the best he can. It is further consistent with the aim of testing ability to think rather than factual knowledge, that the regulations permit the candidate to 'use such aids as are customarily used in doing similar work in class.' In the classics the use of a dictionary is allowed, as also a one-language dictionary in modern languages.

Additional help may be given to candidates during the written examination if this is necessary for understanding the task set. The candidates are also allowed to attach to the end of their answer any explanations which may give further information about the way in which they have tackled the question. They may also 'express their

doubts as to the correctness of the solution they have reached or indicate what difficulties prevented them from finding the solution to a problem.'

The actual marking of the papers is carried out in the first place by the respective specialist teachers who have been responsible for teaching their particular subjects to the candidates. The papers are then circulated to all members of the examining board who sign that they have read them. If they disagree with the assessment they can add a written statement to that effect. All papers which are not at least 'satisfactory' must be marked a second time by another specialist colleague. For each script the marker has to write, on a separate sheet, a formal assessment of the merits and weaknesses of the answer of the candidate. The papers are seen by the headmaster. They may be reviewed by assessors who are usually senior inspectors. As a rule the inspector reviews the papers of the candidates who will be presented for the oral examination on the day or days on which he will preside.

There is no procedure for standardizing or correlating results from various schools. The general oversight of the Ministry's inspector in a given area is considered adequate to ensure that standards are comparable. Since marks out of a 100 are never given the comparison would be, in any case, on broad bands of a six point scale. In practice this becomes a five point scale since really 'unsatisfactory' pupils would not be admitted to the last year of the sixth form. The mark awarded by the school board in each subject on a six point scale is as follows: 1=very good; 2=good; 3=satisfactory; 4=pass; 5=fail; 6=unsatisfactory.

The oral examination is conducted by the examining board of the school, consisting of the specialist teachers of the sixth form, the headmaster and the senior inspector who acts as assessor or chairman. Those teachers who do not belong to the examining board are required to attend on the first day of the oral examination; in practice a number attend on other days as well if they feel inclined to do so, they are not expected to intervene unless their opinion is specifically sought. A master who teaches the subject in which a boy is being examined—though he need not necessarily have taught that particular pupil—draws up an official record of the performance of the pupil during the examination.

In determining how many and in which subjects a candidate is to be examined, the board takes into account his previous performance; if he has done consistently good work in the four subjects during the preceding year and in the written examination he is likely to be exempt from the oral examination in those subjects. Normally a 'good' or 'very good' candidate will be orally examined in only one subject, others in two, occasionally three. Examining boards are advised in the regulations to give adequate place to social studies, and this does, in fact, figure prominently in the subjects set.

The actual questioning in a particular subject is carried out by the specialist who has taught the pupil in the sixth form; the chairman (i.e. the representative of the Ministry or the headmaster) may ask questions as well (or even, in exceptional cases, has the right to take over the examination himself). The task set for a candidate, and for which he has had half an hour to prepare, is usually one which, though inevitably requiring a background of knowledge, demands primarily

the exercise of his critical faculties, and of his capacity for approaching a subject or theme in a coherent way. He is expected therefore to give a continuous treatment of the particular theme or subject, which is always such as to exclude the possibility of reproducing material learnt by heart. If he is unable to get going on the subject set for him the specialist teacher has to decide whether to set a new task or to examine the candidate's ability further by question and dialogue.

In practice the examining teacher usually chooses to put further questions when a candidate seems to make little headway with his theme or problem. In this situation, which is not infrequent, a great deal depends on the art and intellectual equipment of the teacher and, where the subject has complexity, an observer cannot escape the impression that it is almost as much an examination of the teacher as of the candidate! He is working in the presence of his fellow specialists and other members of the staff and both the responses of the candidate and his own confidence in coping with unexpected difficulties, asking the right questions, making the right corrections of inadequacies or errors are, in a sense, a test of his competence as a teacher.

## Some Comments

The *Abitur* has retained its traditional character as a test of suitability for entry to the university, and as such is restricted to a comparatively small proportion of the age group—in 1964 the number of successful pupils, not far short of the number presented for the examination, represented 7.2 per cent of the age group. In this sense it has been the subject of lively controversy in Germany, and some of the issues raised are not unfamiliar to us in Great Britain. To mention only two: the critics of the *Abitur* maintain that, given the objective—entry to higher education—too few pupils are admitted to the examination and that this number must be doubled if it is to meet the expanding needs of a modern industrialised society. The 'pool of ability' it is claimed is large enough to allow this without lowering standards. Secondly, it is urged, the objective itself is too exclusive an aim and an increasing number of pupils after matriculation enter without university training upon careers leading to responsible positions in industry, politics, and commerce. They further complain that the *Abitur* examination is not an appropriate test of suitability for such careers.

It is not possible here to enter into the complexities of the German debate, but briefly it can be said that the common answer in Germany to the first criticism is the plain refusal to believe that the number of candidates can be doubled without a drastic lowering of those standards which have been traditionally the pride of German education; it is also pointed out that there are other roads to the *Abitur* outside the sixth-form. To the second criticism it is maintained that the ever-increasing trend towards specialisation in university courses makes it essential that the secondary school should give its pupils a good general education and avoid premature specialisation. It is argued further that recent reforms in secondary education have both lightened the burden of sixth-form studies and also preserved the essential features of a general education which is a suitable and necessary groundwork for a variety of careers.

In respect of the *Abitur* itself as a technique of examining, there is little disposition to change except perhaps in the direction of still greater

freedom, and there is support in some quarters even for the abolition of the examination and for granting a matriculation certificate on the basis of the report given by the teachers of the top form. But from the British point of view it is already tantalisingly impressive that a modern, complex, industrialised society contrives to serve its essential purpose—academic, industrial, technological, scientific, etc.—with only one examination throughout its secondary education and that an internal one, at the age of 19.

As far as numbers are concerned, the internal examination is made more manageable for the staff by the fact that the numbers are reduced by admitting into the last year and to the examination only those pupils who have reached a satisfactory standard, thus reducing failures to negligible proportions. Altogether 80 candidates (as in one of the schools visited) take about five days for the oral examination, and with only one paper in each of four subjects, four days for the written examination. In view of the rapidly expanding examination demands in this country, and of the fact that the examining machinery is put to the service of failing, predictably, nearly half the candidates, it may be worth considering whether some similar kind of weeding-out procedure is desirable and practicable. It might also convert a number of first-year sixth-formers to a more strenuous view of study than is often at present the case.

An internal examination in which each school conducts its own examination naturally raises the question of standards and comparability of standards. There exists no machinery in any of the German states for assessing and comparing standards as between the various schools; there is only the representative of the Ministry of each *Land* who is charged with the task of ensuring some rough similarity of standards. In the nature of the case this function cannot be exercised with exactness, and it is conceded that in practice standards will vary to some extent between schools according to the quality of the staff, and large cities usually attract the best staff. The Germans maintain that this variation is not so great as to cause concern; the standards created by a century-old tradition are themselves high and the supervisory functions of the Ministry representative constitute an adequate safeguard. They argue further that to create a vast structure of assessment and measurement would be a time and labour consuming operation out of proportion to the results, in which variation would occur anyway. At all events, 'comparability of standards' is not an issue in Germany and the *Abitur* carries equal weight from all schools wherever it is required as a qualification.

The oral side of the examination is of particular interest in view of the increasing attention given to it in this country. Perhaps the main doubts in Britain would arise in respect of the practicability and the strain of examining orally very large numbers, say between 150-250 pupils. The two schools visited presented 80 and 50 candidates respectively, manageable numbers in terms of time; even so it could not be said that the final stages were entirely without strain for the examining board. It would also need the observed experience of very large schools in Germany to determine whether a very big increase in the numbers of candidates in each subject tends to exhaust human resourcefulness in devising individual questions for each candidate.

It might be expected that candidates would be nervous in the presence of a large examining board; usually this did not seem to be the case,

and where it was suspected the examiner made every effort to normalise the situation. The large majority of the candidates seemed to be at their ease and this may be attributed to the fact that they had a sense of security in being examined by a familiar figure—their own teacher—and to the fact that the oral examination encourages class discussion and exposition by the pupil as a regular classroom practice.

The written examination is in strong contrast to the British examination which usually requires five or six questions to be answered in each three hour paper, and which is for many pupils a race against the clock. This is not the place for a comparison of the two systems, but it is worth noting that the *Abitur* question cannot be answered by a mere learning of facts. On the other hand, it might also be objected that the single-problem type of question paper in the *Abitur* gives too little credit to the sheer industry and learning power of the average performer. The German reply to this criticism is that industry is taken into account in the assessment of pupils' work over two years and that this will count in any case in the final assessment. In favour of the problem type of question, it can be said that it tends to encourage a discussional approach to teaching and to discourage mechanical note-giving. In all the lessons seen in the two schools, in a variety of subjects, this was in fact the case; discussion was the basic technique used and the pupils were actively involved in each lesson.

It will have been noted that all the subjects studied are examined; this follows the German conviction that a general education must result from teaching through discussion, and that it must all be susceptible to examination, even if only orally.

In the final judgment of the pupil, his whole record over two years is taken into account as an integral part of the examination; significant weight is given to it. There is little room for negative surprises; an industrious pupil who has grasped the course can hardly fail, and the examination itself is perhaps more an opportunity for surpassing his record than a possibility of surprise defeat. The whole procedure is calculated to give the pupil a sense of security in a humanised examination situation in which his personality, his history, his record are all taken into account by people with whom he has a long-standing personal relationship. Of course where personal relationships are not good this system can have obvious disadvantages!

Finally, it is clear that the acceptability to public opinion of the *Abitur* as an internal examination rests upon confidence in the teachers. However controversial certain aspects of the examination may be at the present time, no dissent can be heard in Germany from the view that if teachers can be entrusted with the education of pupils for nine years they can also be trusted to examine them. The teachers for their part show no wish to decline a responsibility which has a long tradition.

*There is a growing interest in comparative studies in education and an increased awareness of their importance. This article indicates the reasons and suggests some areas where comparative studies have special significance.*

# The Relevance of Comparative Education

E. GLYN LEWIS

The Department of Education and Science, in its several metamorphoses, has contributed greatly in this country to the comparative study of education. Mathew Arnold's first essay in this field was *The popular education of France with notices of that of Holland and Switzerland*. Seven years later he published *Schools and Universities on the Continent*. This interest was fostered by Sir Michael Sadler, who from 1896–1912 supervised the annual production and publication of studies for the Office of Special Enquiries and Reports. So far as official publications go, however, the United States can claim precedence in point of time, for in 1844 Horace Mann wrote the classic *Seventh Annual Report to the Massachusetts Board of Education.**

During the last 50 years a most revealing index of the acceptance of the importance of comparative studies in this country may be found in the interest of successive advisory councils and commissions on aspects of education; the Spens committee invited a contribution from Professor Kandel; the Robbins committee gave a considerable amount of time and attention to the study of universities abroad, and the present Plowden committee has studied several foreign systems of primary education.

It is not difficult to understand the reasons for the very gradual but real development of interest. In the first place there has been an innate tendency or logical progression within the study of education. Beginning with a philosophical approach—an attempt to understand education as a process governed everywhere and at all times by the same universal principles, there was a shift towards an empirical, scientific approach—an attempt to observe how the processes of learning actually operate and with what results. Later, these two complementary modes of study were influenced by the growth of national states, so that the metaphysical and the empirical approaches came to be considered in the context of particular historically conditioned systems. Comparative studies could not have evolved without the complete realisation of national systems; at the same time the national and historical developments made the need for such comparative studies all the greater. Comparative studies are the natural result of the conflict between, on the one hand, the rationalism and

*For historical background to this subject see *La Pédagogie Comparée*. Franz Hilker, Paris, 1962.

universalism of the 'enlightenment' and that particularism which is an aspect of national cultures and the growth of localised systems.

This logical development in educational studies has been accelerated by what has been called the 'education explosion', affecting all countries without exception. The very fact of its ubiquity has directed the minds of administrators, legislators and teachers not simply to their own experience, but to possible common, general factors, the discovery of which might be of some practical value. Furthermore, in the case of the former colonial territories, comparative studies are seen as the necessary means of release from what are regarded as undesirably close ties with an 'inherited' system: for them comparison is the instrument of 'educational eclecticism', the inevitable consequence of the conjunction of relinquished colonial control and the absence of native foundations for a truly indigenous system.

A second reason for the trend towards comparative studies has been the realisation of the need for international understanding, itself partly the product of the rapid and violent contraction of the world. While it is true that comparative studies have a vital contribution to make to the solution of practical educational problems, their justification ought not to be proposed in exclusively utilitarian terms: they have their value simply because they increase knowledge and improve its interpretation. And this is certainly true so far as affects our knowledge and understanding of other peoples. Education itself is the best means we have of creating such understanding, and for that reason alone it is not strange that the study of the organisation of different systems of education, of different ways in which sympathy or prejudice is created or reinforced might be conducive to international understanding. Furthermore, comparative studies lend themselves to and call for considerable international co-operation in the selection of subjects for study, the collection and the interpretation of information, and the assessment of the relevance and value of the results.

The contraction of the world has created, also, a realisation of the interdependence of its parts, which is not necessarily the same as the realisation of the need for mutual understanding. More than ever before, a nation's ability to survive in the contemporary world, and to meet challenges which succeed each other with ever increasing rapidity, depends in large measure on the adequacy and the efficiency of scientists and technologists, business and industrial executives, linguists, etc., and of the system which produces them. This has emphasised the need to make comparisons of the results of educational systems and of how the results have been achieved.

The relation of education to an industrial and scientific civilisation affects comparative studies in another way. Teaching is increasingly influenced by attitudes and procedures characteristic of the physical sciences; it is rapidly becoming a technical operation. In the past the teacher's role was pre-eminently a personal one; he suited his teaching and his materials to his own likes and preferences. The exploitation of his own personality was expected to be as important a contribution as the method and materials he used. This is no longer the case to anything like the same degree as it was 50 or even 20 years ago. The large increase in the number of pupils to be taught and of the teachers required to teach them has necessitated an emphasis on the possession of acceptable competence in all, in contrast to the pursuit of excellence among a few teachers. This involves the employment of uniform

and standardised methods for their training, and of uniform and standardised methods and materials for teaching. This being the case, there is the expectation that the standardised and uniform materials and methods should in some way bear the stamp of scientific validity; the processes of education, it is argued, must be guided in much the same way as the processes of scientific and industrial production. In other words technology is appropriating to itself more and more of the field of education. Added to this is the prestige which scientific research and the application of the results of research have gained in whatever field one cares to think of. All these have led to the destruction of the concept of the teachers' practice as something highly personal, individual and localised. Teachers, whether we like it or not, are willing to forego the illusion of personal choice and freedom if they can be assured that their pupils benefit from their acceptance of these uniform and standardised methods and materials.

We have only to think of work now being done in this country in science, mathematics, the production of materials in modern languages (for the first time in primary schools on any significant scale). These materials and the methods related to them are being progressively standardised for this country and whatever may be said to the contrary they are likely to impose a measure of uniformity on the teacher. Often the same methods and materials are standardised for many areas in the United States, witness the case of the Initial Teaching Alphabet. Where the materials in use are not current in the United States, much of the research and development work that has contributed to their production, for instance in language learning, may have occurred there. Much of the standardised material in science and mathematics now being experimented with in the United States and this country is also being introduced into parts of Africa. The excellence of the teaching of English as a second language and of the materials for that work is due to work done in a large number of very different Asian and African countries, both by the United States and ourselves, while the study of bilingual education, a related problem, requires the most broadly based comparative investigation. The influence of CREDIF upon the thinking of teachers and researchers in modern languages in this country, and the influence of the British idea of 'boarding school education' on thinking in the USSR point to the impact of international experience upon national developments. All these require an understanding of the similarities and differences between various educational systems and they encourage and require comparative studies. Perhaps the most promising field for this kind of exercise is the study of the place of 'Social Education' in the various national systems.

There is a third reason for the present interest in comparative studies. Mention was made earlier of the development of a historical approach to the study of education. At the same time, with the impact of 'romantic' philosophical and sociological ideas upon notions about nationalism, the stress on cultural relativism, influenced largely by the writings of Herder and Von Humboldt, became pronounced. Each culture, and each nation, whatever its stage of development, because it was unique, was regarded as equally valuable; consequently the study of primitive systems came to rank in importance with the more developed and sophisticated, and indeed to be vastly more interesting. The egalitarianism of democratic thinking enriched the soil in which an interest in and a justification of comparative studies grew. Democracy

carries with it also the acceptance of centralised and uniform systemisation, and this in turn has provided for and required standardised systems of gathering and interpreting national educational data. Consequently comparative studies have assumed vastly greater importance during the last half century. Factors inherent in the development of educational studies, and in the world of science, industry and politics have made the need for such studies very evident, and the condition of the modern state has made the satisfaction of that need possible by ensuring the availability of the necessary information.

## Contributions to Education Practice

No matter what the conditions favourable to comparative studies might be, it is doubtful whether they would have found the place they have, even in universities, were it not for the contribution which they have the power to make, not only to the study but also to the practice of education. The aim of comparison is to improve practice. It cannot be doubted that the reform of education in some countries is motivated by studies of achievement of other nations in various areas of the curriculum (literacy, mathematics, the sciences and modern languages), administration, the professional training and the social and economic status of teachers. The results of these comparative studies can be quantified. But such studies are useful in another respect; they help to make explicit the underlying, often deeply unconscious assumptions on which parents, teachers, administrators and legislators operate. Cross-cultural comparisons enable us to distinguish what is universal and of permanent importance in any system from what is occasional and expedient. The realisation of what factors belong to either category is necessary to the rational organisation of all aspects of education. Two of our greatest comparativists have insisted on this. Neither Sadler nor Kandel doubted that if we endeavoured sympathetically to understand the working of a foreign system of education, we should in turn find ourselves better able to enter into the spirit and tradition of our national education, and become more sensitive to and consequently be more critical of its unwritten ideals.

Such presuppositions belong to two levels at least. There are first of all the ideological or philosophical considerations which, within very broad limits, guide a nation's traditional religious, economic and social behaviour. This the educational system serves partly to improve and refine, but in a far greater degree to consolidate and perpetuate. The presuppositions which belong to this level enter into arguments about types of school organisation, the wisdom or otherwise of selection and streaming. They enter, no less, into the advocacy of this or that form of instruction, ranging from the views of Locke, through Rousseau, Dewey, Whitehead and others to Skinner's mechanistic and mechanical programming which derives its validity from the acceptance of a materialist, behaviourist and determinist approach, very much open to question not only in philosophical terms.

Nor can it be doubted that the different interpretations offered by Piaget and Vygotsky of what is largely similar if not identical data, tending to insist on the importance of maturation and instruction respectively in the learning process, have been affected by the kind of assumptions which govern the systems of education in which they operate—on the one hand the stress on educational freedom and the

natural development of a child, and on the other the emphasis on 'social engineering'. This is not to suggest that their sciences are suspect, but simply that there are subjective, unacknowledged factors which influence the working of their minds. Only by making these presuppositions explicit and allowing for them can we derive value from their work; and only on those conditions are we justified in generalising from or extrapolating the results of research in the social sciences conducted in different countries.

There is a different level or category of presuppositions which needs to be brought to the surface. I have suggested that the system of education exists in an important sense to safeguard the traditional, ideological, philosophical or religious inclinations of a society. But it exists also to promote more immediate interests, determined sometimes by demands which may run counter to, or at least cannot be explained in terms of traditional ideological bases. This occurs in time of war or revolution, when the educational system may very well be transformed temporarily, as was the case in Italy and Germany not so very long ago, and is still the case in China, and to a lesser extent, Japan. But these short-term demands upon the educational system may occur in less turbulent times, as is the case in Britain at present, where interest in the teaching of science and mathematics is only partly an expression of the regard for these subjects as contributing to the education, in the broadcast sense, of the individual. Their importance is an expression also of the immediate need for a certain type of trained product. Similarly, the realisation in the United States of the value of modern languages is as much a concession to the immediate impact of United States emergence as a world power, and the need for trained operators in such a world, as it is to a respect for modern languages in a rich curriculum. The same can be said for the introduction of modern languages in the primary school of this country, the demand for which coincided with crucially important arguments about the European destiny of Britain. Without the recognition of these, for many people unacknowledged or disguised or rationalised motives and assumptions, how can we rightly organise the curriculum of our schools, or approach the teaching of the various subjects in such a way that they serve the immediate purpose without vitiating the general aims of education?

Although the necessary explication of unacknowledged presuppositions is promoted by comparative studies, it is hardly possible to exaggerate the difficulties which are involved—especially the difficulty of relating in any sensible fashion the differences which exist between even related cultures. It is true that 'an understanding of the impact of cultures on educational aptitude, values, interests, personality and achievement is obviously important in the planned reform of education'; but an understanding of this impact, if it is to reach any level of sophistication, involves measurement of the differences of impact on several cultures, and the creation of instruments to provide for such measurements which can be used in very different cultural contexts. It is an extremely difficult task: students of language and culture-contact have attempted to devise 'culture free' tests and have not succeeded. Researchers from Kyushu experienced the difficulty when they visited Europe to compare moral attitudes among English, German, French and Japanese children. It is being faced by researchers in the United States at present embarking upon an international study of the critical criteria employed by students, in several countries, of

their national literature. Nevertheless, insofar as comparative education is to be of value in the study of qualitative as opposed to the statistical or numerical aspects of the subject, such cross cultural instruments will need to be devised.

Comparative studies have a further contribution to offer—this time in research in educational, genetic psychology and experimental pedagogy. Activities in these fields of study are directed at the present time along lines of intensive, analytical approaches, governed by the principles adopted in the physical sciences. This approach has four elements: description, explanation, prediction and application. It is a fact that educational research, like all research in the social sciences, can satisfy the demands of scientific description and application very well. But it cannot be exhaustive in its explanations, nor sufficiently precise in its predictions—not simply because of the immaturity of the discipline, but strictly because of its nature. Evidence derived from other sources, not open to the same objections, ought to be procured. What comparative education provides is breadth of reference to compensate for the intensity of experimental probing. By means of 'cross cultural comparison' the 'universals' of the educational processes can be identified and the explanation which cannot be exhaustive if it is limited to experimental work in one laboratory setting, can be generalised if not universalised. The attempt to employ intelligence tests in countries with different cultural norms from ours served to deny the possibility of their general or universal acceptance. No doubt Bernstein's important investigations into the relation of language, learning, and class affiliations, will lend themselves in his hands to such comparative study. Whatever may be the truth of the matter in this country, before the results of his work can have more than local validity, they will need to be tested in situations where the 'class variable' does not operate, or not to the same extent. I suspect that when this is attempted there will need to be a considerable modification of what is meant by class; and to that extent the importance of the conclusions in respect of children in this country will have been increased because the area of their relevance will have extended.

Finally, we cannot proceed very far with the solution of the educational difficulties of immigrant pupils in this country without comparative studies. We need to know more about the general social and cultural factors which govern the thinking of the parents about education in the broad sense, and child rearing in a more narrow sense. What factors motivate their demand for knowledge in their traditional and native cultures? What is their traditional attitude to the teacher in their own cultures where very often it is closely allied to religious forces? In even more specific terms, what do we know of their native language, their mother tongue? Without some knowledge of this, how can we help teachers to identify those features of the English language they are likely to find most difficult to acquire? We cannot help the immigrant to fit into our own culture unless we know first how he fitted into his own, and for this a series of comparative studies is required.

*This article is the second of a series interpreting some of the main educational statistics published by the Department.*

# Still Further

'The importance of further education is apparent at all levels: full-time, sandwich and part-time courses leading to degrees as part of the higher education of the country, as well as courses at the intermediate and lower levels. In industrial terms, the range is from training for senior management to courses for craftsmen and operatives.'

This passage is from *The National Plan** which shows provision for further education expanding faster from 1964-65 to 1969-70 than any other part of the education service: by 58 per cent, in fact, compared with a 32 per cent rise for all education in Great Britain. In absolute terms this is a projection from the 1964-65 estimated spending of £141 million to an estimated £235 million (at constant prices) five years later, when further education would be absorbing some 12 per cent of the total resources available for education. This is a rapid rate of growth for what is described as one of the foundations of 'the long-run increase in productivity in Britain'.

## Snapshot

The latest statistical photograph of further education in England and Wales was taken in November 1964 and the results are published in *Statistics of Education* 1964 *Part Two*.† At that time further education was being provided in seven national colleges, ten CATs, over five hundred technical colleges (including colleges of commerce), over two hundred specialised art and agricultural establishments, and nearly eight thousand evening institutes. Building programmes (excluding those for the CATs) to a total value of about £180 million have been approved since 1956, while the number of full-time teachers has gone up from 10,000 in 1955 to over 35,000.

**Grant-aided establishments of further education in England and Wales** (*Number of establishments and students, November* 1964)

| | | *Students* | | |
|---|---|---|---|---|
| | | *Full-time** | *Part-time day* | *Evening only* |
| National colleges | 7 | 1,108 | 86 | 342 |
| CATs | 10 | 14,083 | 4,072 | 4,604 |
| Art establishments | 158 | 22,280 | 41,022 | 57,275 |
| Agricultural colleges | 5 | 1,357 | nil | nil |
| Farm institutes | 40 | 2,648 | 3,889 | 2,226 |
| Regional colleges | 25 | 20,054 | 35,231 | 36,974 |
| Other major establishments | 514 | 127,986 | 563,989 | 676,977 |
| Evening institutes | 7,784 | nil | nil | 1,131,509 |

*Including sandwich courses

*Cmnd. 2764 HMSO 1965 £1 10s. (by post £1 11s. 3d.)

†HMSO 1965, £1 7s. 6d. (by post £1 8s. 4d.)

The regional colleges and other major establishments—provided, staffed and organised by the local education authorities and geared closely to industrial demand in their areas—were providing in 1964-65 a wide range of courses for nearly 150,000 full-time (including sandwich) students and four times as many part-time day students. In addition there were in the colleges nearly as many evening-only students as all the day-time students put together. The total roll therefore was of the order of a million and a half students. At the evening institutes there were a further million upwards of evening-only students, a majority of whom were following recreational interests and the rest engaged in vocational studies.

The level of work on courses leading to recognised qualifications is divided into advanced and non-advanced. The former include degrees, diplomas and certificates of sub-degree level.

**Advanced and non-advanced students in England and Wales** (*November* 1964)

| | *Advanced* | | | *Non-Advanced* | | |
|---|---|---|---|---|---|---|
| | *Men* | *Women* | *Total* | *Men* | *Women* | *Total* |
| National Colleges | 1,299 | 6 | 1,305 | 193 | — | 193 |
| CATs | 18,022 | 1,665 | 19,687 | 158 | 61 | 219 |
| Art establishments | 6,129 | 4,039 | 10,168 | 28,269 | 10,463 | 38,732 |
| Agricultural colleges | 50 | 6 | 56 | 1,098 | 178 | 1,276 |
| Farm institutes | 8 | 5 | 13 | 5,823 | 593 | 6,416 |
| Regional colleges | 35,629 | 2,147 | 37,776 | 31,957 | 3,565 | 35,522 |
| Other major establishments | 82,816 | 6,093 | 88,909 | 607,228 | 125,336 | 732,564 |
| Evening institutes | 169 | 61 | 230 | 17,747 | 7,343 | 25,090 |
| | 144,122 | 14,022 | 158,144 | 692,473 | 147,539 | 840,012 |

In 1964-65 there were 158,000 students taking advanced courses.*

There were 67,000 following engineering, 28,000 business and administration, 21,000 natural sciences, 9,000 building and 8,000 art and design courses.

Men students out-numbered women by ten to one—but the proportion of women has increased a little.

'Advanced courses' are mainly courses requiring entry qualifications at 'A' level, ONC or equivalent. There are also many non-advanced courses—in fields such as social work, agriculture, institutional management and catering—in which students over 18 pursue work beyond 'A' level standard.

There were 840,000 students taking non-advanced courses leading to recognised qualifications, such as ONC, the GCE, City and Guilds and regional examining bodies, certificates, and similar awards. Again engineering was the main subject, occupying over 270,000 of the students. GCE students constituted a large group (nearly 190,000), and other considerable numbers were following building (nearly 100,000) and business and administration (over 75,000).

*Excluding CATs, which are acquiring new status, there were in 1964-5 145,000 students on advanced courses of all kinds in Great Britain, of whom over 43,500 were full-time or sandwich students. This compares with about 114,000 and 27,000 for 1961-62, showing increases of about 25 per cent and 60 per cent. The Robbins Committee's estimate for full-time and sandwich students in 1964-65 was 39,000, so that the target was already beaten by 4,500. This trend will certainly continue and, as the Government indicated in the National Plan, it is expected that over 70,000 such places will be available in 1969-70, as compared with the Robbins Committee's target of 50,000 by 1973-74.

## Moving Picture

The number of students in further education has increased by a half in ten years:

**Number of students at all grant-aided establishments, 1954 to 1964** (*Autumn term, thousands*)

| | *1954* | *1964* |
|---|---|---|
| Full-time | 53.8 | 167.3 |
| Sandwich | 1.4 | 22.2 |
| Part-time day | 361.2 | 648.3 |
| Evening-only (in major establishments) | 576.1 | 778.4 |
| Evening institutes | 821.7 | 1,131.5 |
| All courses | 1,814.2 | 2,747.7 |

A striking increase has taken place in the number of students following full-time and sandwich courses, which has more than trebled over the decade. The rate of increase in full-time and sandwich students taking advanced courses has been still more rapid:

**Students taking advanced courses** (*Autumn term, thousands*)

| | *1954* | *1958* | *1964* |
|---|---|---|---|
| Full-time | 8.42 | 13.37 | 33.55 |
| Sandwich | 1.24 | 7.57 | 19.90 |
| Part-time day | 27.11 | 37.36 | 56.96 |
| All day-time | 36.77 | 58.30 | 110.41 |
| Evening only | n.a. | 31.36 | 47.74 |
| Total | n.a. | 89.66 | 158.14 |

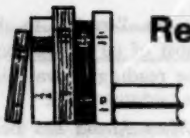
Including the part-time students there was a trebling during the ten years in the advanced day-time work of the colleges.

Despite these increases the National Plan envisaged further substantial expansion. The projections for England and Wales were:

**Projected trend in student numbers**

| | *1964–65* | *1969–70* | *Increase* (*thousands*) | (*per cent*) |
|---|---|---|---|---|
| Major establishments | | | | |
| Full-time | 161 | 238 | 77 | 48 |
| Sandwich | 14 | 21 | 7 | 47 |
| Part-time day | 644 | 981 | 337 | 52 |
| Evening | 774 | 860 | 86 | 11 |
| Evening institutes | 1,132 | 1,238 | 106 | 9 |
| Total as full-time equivalent | 527 | 714 | 187 | 36 |

This table represents projections of the percentage of the population participating in further education over the last eight years, applied to the Government Actuary's population projection and modified to take account of the Henniker-Heaton report on day release (1964). They do *not* take account of any further increases which may result from the establishment of the Industrial Training Boards, such estimates being too imprecise at the time the Plan was being prepared.



# Reviews

## The Disappearing Dais

by Frank Whitehead

*Chatto and Windus Ltd. 25s.*

The title *The Disappearing Dais* has been taken from a Schools Council memorandum, in which the restrictive nature of the teacher's superior dais was lamented. Its disappearance from an English classroom, suggests Mr. Whitehead, marks the transformation into something more of a workshop, with a new relation between teacher and student.

The book is subtitled 'a study of the principles and practice of English teaching' and has two long chapters for its main body. One called 'Reading and Literature' (to which might be attached the short chapter which follows on the teaching of poetry), the other 'Talking and Writing' (again with a short appendage, on the teaching of grammar); they are separated by a chapter called, a little less luckily, 'Drama Lessons'. An epilogue on examinations balances the prologue on first principles. In each of his chapters Whitehead illustrates the working out of his principles with examples and discussions of practices which have a convincing smack of the classroom, if more often the grammar school classroom. The chapter 'Talking and Writing' is particularly readable.

*The Disappearing Dais* reminds one of George Sampson's *English for the English*, but Whitehead is more of a scholar (and, occasionally, when he flags, of a pedagogue) than Sampson, less of a journalist and debater, and, of course, is putting forward a far more elaborated argument. But, like Sampson, he often uses convincingly the touchstone of common sense.

A point made by Whitehead in his opening chapter is that time's pedagogic sons, like all her others, are borne away on that ever rolling stream, and many of the much quoted commentators on the English teaching scene are nowadays almost out of hailing distance. He instances I. A. Gordon's book, well-regarded when it was first published in 1947, which was helpful (if not alone) in emphasizing that English teaching was concerned primarily with communication and not with information. This is a point valuably made, because Mr. Whitehead goes on at once to suggest the shortcomings of the description, in that it leaves out of account the creative role of language. He announces from the start his own key-principle. 'The main business of the English teacher . . . is the provision of abundant opportunity for the child to use . . . his mother-tongue in each of its four modes (listening, speaking, reading and writing) and for all the varied purposes (practical, social, imaginative, creative) which make up its totality; under expert guidance and in situations which will develop ultimately his power to be self-critical about his own efforts'.

George Sampson said something like this, more hotly although less lucidly, when he enunciated 'In plain words and in the ordinary sense, English is not a school subject at all. It is a condition of life'.

**E.W.**

## Freedom and Authority in Education

by G. H. Bantock

*Faber & Faber Ltd. 25s.*

This is a second edition of Professor Bantock's first essay in identifying educational objectives. It provoked controversy in the 1950s and is here reprinted without revision but with a new introduction which contains a fine tribute to the teaching of the late Douglas Brown at the Perse School, Cambridge. In this Bantock observes that the *avant garde*, 'progressive', reforming voice in the debate on education is now heard less on the subject of method and content; instead it expresses its concern about form and structure. One unhappy consequence is that the debate itself has been largely transferred from the classroom to the corridors of power.

Fourteen years ago Bantock was challenging the views of those who tended to discount the importance of subject matter for the sake of vague, but often authoritarian, concepts like the 'whole' child or the 'real' situation. To-day he carries the

attack into the camp of the sociological critics who are sometimes conservative in their attitude to values and methods in education and only radical in demanding more equality of access to what is. They demand a change in the social *ends* which education serves rather than in the pedagogical means which teachers use.

Bantock is among those who worry less about the question of who benefits from our educational resources than about whether we may not be diminishing those resources themselves. He reminds us of Matthew Arnold's insistence that "governing the teacher's whole design . . . should be the calling forth by some means or other, in every pupil, a sense of pleasurable activity and creation". Often we appear to value the chicanery of mass preparation for examinations above the creativity of individual performance.

It is alarming to find the argument for comprehensive schools repeatedly supported by reference to success in external examinations. This, as Bryan Wilson has pointed out, contributes (alongside the efforts of the advertisers) to a 'youth-culture' which is in effect a generational defence-mechanism against the charge of failure in a society which places a high premium on educational success". In directing educational effort towards social and communal goals we may reduce both the area in which the influence of the teacher can operate or indeed his capacity to exert any personal influence at all.

Professor Bantock has by now become an Odysseus in the elitist camp. His arguments are wily and important, as many captains in the opposing camp are prepared to recognise. All his books deserve attention—though it is a pity that this one should be disfigured by the archaic controversy with Professor Ford about the school at Mishman' Ha'emek in Israel, especially as our attention is drawn to it by the new introduction.

**D.H.**

## Understanding the Mass Media

by Nicholas Tucker

*Cambridge University Press 30s.*

The products of the mass media that appeal to a child—even quite a bright child—may simply be "trash" to his teacher. Yet like most of us he will only spend his spare time reading or watching what interests him.

*Understanding the Mass Media* has been written for those teachers who want to supply 'the third voice, that neither accepts nor rejects the mass media on principle, but dissects, analyses and appraises'. The first voice is of course the noise made by pop culture itself, the second the blasts from the pulpits and rostra of those who can see nothing good in mass culture and entertainment. Whether we like it or not the mass media are here to stay. There is evidence that, within certain limits children are naturally critical of what they see, read and hear.

To understand the mass media it is necessary for the teacher to subject himself to them. In other words to come to grips with what may be an alien culture. This will involve watching television during children's peak viewing time, extending his own reading of the national press to include the *Daily Mirror* and *The Times* if these journals are not included already, and delving deeply into fiction of a kind he knew existed but did not bother with. His reading diet will need to be catholic and well-digested, and range from Mickey (*Vengeance is Mine*) Spillane on the one hand to Valentine and Mirabelle on the other. At the same time he will need to understand the big and all pervasive world of advertising; to know what is involved in copy-writing; what AB readership is; and what motivates the various advertising approaches.

Obviously, anyone who cannot overcome his own prejudices should not venture to attempt lessons aimed at evaluating mass culture, but for those who can the possibilities for creative teaching are infinite.

Among the suggestions the book makes for class work on the mass media are the possibilities of examining the way different papers handle certain news, and why; the following of advertising campaigns from their first whispering in *Advertiser's Weekly* to their last whimpering in some obscure monthly; the analysis of television serials and the criticism of pop music.

**M.C.**

This pamphlet surveys the work of schools known to have carried into practice programmes of health education which contribute to the physical, mental and social well-being of their pupils. Its first section gives some indication of how such work may fit in with modern ideas of child development. The features of modern school buildings and sites as they influence health education are then described. A third section gives an outline of the school health service, and a final section describes the way in which very many schools have dealt with personal aspects of health education. (*Available about July* 1966)

*PUBLISHED BY* **HER MAJESTY'S STATIONERY OFFICE**

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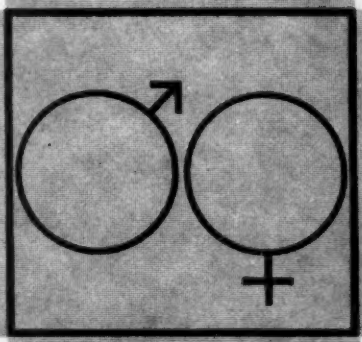
# HEALTH IN EDUCATION

A new Education Pamphlet from the Department of Education and Science



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